Pecyn Cyhoeddus

Cyngor Sir
CEREDIGION
County Council

Neuadd Cyngor Ceredigion, Penmorfa,
Aberaeron, Ceredigion SA46 0PA
ceredigion.gov.uk

Dydd Iau, 13 Hydref 2022

Lisa Evans

Annwyl Syr / Fadam

Ysgrifennaf i'ch hysbysu y cynhelir Cyfarfod o Pwyllgor Trosolwg a Chraffu Cymunedau Ffyniannus yn Siambr y Cyngor, Neuadd Cyngor Ceredigion, Penmorfa, Aberaeron., Dydd Mercher, 19 Hydref 2022 am 10.00 am i drafod y materion canlynol:

1. **Ymddiheuriadau**

2. **Datgelu buddiant personol (gan gynnwys datganiadau chwipio) Atgoffir aelodau am eu cyfrifoldeb personol yn datgan unrhyw fudd personol a budd sydd yn rhagfarnu yn gysylltiedig â materion a gynhwysir yn yr agenda hwn yn unol â darpariaethau Deddf Llywodraeth Leol 2000, Cyfansoddiad y Cyngor a Chod Ymddygiad Aelodau. Yn ogystal, mae'n rhaid i Aelodau ddatgan unrhyw chwip plaid gwaharddedig a roddwyd ar Aelod yng nghyswllt y cyfarfod yn ôl Mesur Llywodraeth Leol (Cymru) 2011.**

3. **Cynnydd o ran cyflawni'r Strategaeth Economaidd (Tudalennau 3 - 10)**

4. **Gwywiad Coed Ynn - Diweddariad er gwybodaeth (Tudalennau 11 - 82)**

5. **Cynllun Gweithredu Sero Net - diweddariad ar y cynnydd (Tudalennau 83 - 88)**

6. **Cadarnhau Cofnodion y Cyfarfod blaenorol ac ystyried unrhyw faterion sy'n codi o'r Cofnodion (Tudalennau 89 - 96)**

7. **Ystyried Rhaglen Flaen Trosolwg a Chraffu (Tudalennau 97 - 100)**

Darperir Gwasanaeth Cyfieithu ar y Pryd yn y cyfarfod hwn ac mae croeso i'r sawl a fydd yn bresennol ddefnyddio'r Gymraeg neu'r Saesneg yn y cyfarfod.

Yn gywir

Miss Lowri Edwards
Swyddog Arweiniol Corfforaethol: Gwasanaethau Democrataidd

At: Gadeirydd ac Aelodau Pwyllgor Trosolwg a Chraffu Cymunedau Ffyniannus
Weddill Aelodau'r Cyngor er gwybodaeth yn unig.

Cyngor Sir CEREDIGION County Council

ADRODDIAD I'R:	Pwyllgor Trosolwg a Chraffu Cymunedau Ffyniannus
DYDDIAD:	19 Hydref 2022
LLEOLIAD:	Neuadd Cyngor Ceredigion, Penmorfa, Aberaeron / o bell drwy gynhadledd fideo
TEITL:	Cynnydd o ran cyflawni'r Strategaeth Economaidd

Ym mis Mawrth 2021, ar ôl gwaith ymgynghori â rhanddeiliaid allweddol, gan gynnwys nifer o sesiynau gydag is-grŵp o'r Pwyllgor Trosolwg a Chraffu Cymunedau Ffyniannus, a chyda'r pwyllgor ei hun, mabwysiadodd Cabinet Cyngor Sir Ceredigion Strategaeth Economaidd ar gyfer Ceredigion yn ffurfiol.

Mae'r ddogfen hon yn Strategaeth Economaidd Fframwaith ar gyfer Ceredigion i lywio dull gweithredu a chamau gweithredu Cyngor Sir Ceredigion i sicrhau twf economaidd hyd at 2035.

Mae'r strategaeth yn canolbwyntio ar y meysydd dylanwad lle gall Cyngor Sir Ceredigion wneud gwahaniaeth i'r economi – h.y. sut mae'n defnyddio ei asedau cyfalaf, asedau dynol ac asedau refeniw i gael effaith gadarnhaol ar yr economi yng Ngheredigion dros y cyfnod hwnnw.

Mae'n canolbwyntio ar bedwar prif faes blaenoriaeth – Pobl, Menter, Lle a Chysylltedd, gyda phob adran yn amlinellu rhai o'r ymyriadau cynnar a ystyriwyd, sut y caiff effaith ei mesur ynghyd â phwy sydd angen cymryd rhan ac amserlen awgrymedig ar gyfer gweithredu.

Mae'r strategaeth yn cynrychioli fframwaith gweithredu, yn hytrach na rhestr gynhwysfawr o gamau gweithredu sy'n cwmpasu'r cyfnod hyd at 2035.

Mae'r adroddiad hwn yn amlinellu'r camau sydd wedi'u cymryd ers ei lansio ym mis Mawrth 2021.

Rhoi camau gweithredu o fewn y Strategaeth ar waith

Mae llawer o gynlluniau eisoes wedi'u datblygu a'u rhoi ar waith o dan y cyfeiriad strategol a bennwyd gan y Strategaeth Economaidd. Sicrhawyd swm sylweddol o gyllid allanol gan amrywiaeth o sefydliadau rhanddeiliaid allweddol, a fydd yn galluogi'r sylfeini ar gyfer twf economaidd pellach i gael eu rhoi ar waith.

Mae rhai uchafbwyntiau byr wedi'u cynnwys isod:

Blaenoriaeth 1: Pobl

- Sicrhawyd gwerth £2.8m o fuddsoddiad drwy Gronfa Adnewyddu Cymunedol Llywodraeth y DU, ac mae'n cael ei ddarparu ar hyn o bryd drwy 12 prosiect sy'n cynnwys rhanddeiliaid sy'n cefnogi unigolion a busnesau sy'n uniongyrchol gysylltiedig â

chamau gweithredu a nodwyd yn y Strategaeth Economaidd.

- Mae un prosiect, dan arweiniad Antur Cymru, yn mynd i'r afael â niferoedd cynyddol o bobl sy'n ystyried entrepreneuriaeth yn seiliedig ar reidrwydd sy'n wynebu rhwystrau i ymgysylltu â gwasanaethau sefydledig sy'n rhoi cymorth i fusnesau, megis Busnes Cymru. Mae'r prosiect yn galluogi unigolion i feithrin sgiliau trosglwyddadwy drwy gymryd rhan mewn prosiect sy'n darparu sgiliau busnes sylfaenol. Wedi'u cynnwys yn y prosiect mae dwy ganolfan dechrau busnes yn Aberystwyth a Llanbedr Pont Steffan lle gall entrepreneuriaid newydd brofi masnach a sefydlu safleoedd ar gyfer eu nwyddau a'u gwasanaethau.

Blaenoriaeth 2: Lle:
Mae'r camau gweithredu wedi canolbwyntio ar barhau i ddatblygu'r cynlluniau lle, a'u gweithredu drwy gael gafael ar gyllid o wahanol ffynonellau i fynd i'r afael â'r blaenoriaethau a nodwyd.
Hyd yma, mae'r buddsoddiadau a sicrhawyd yn cynnwys y canlynol:

- £10.8m o gyllid y Gronfa Ffyniant Bro gan Lywodraeth y DU ar gyfer tri phrosiect i gefnogi'r gwaith o adfywio a datblygu'r ardal o'r Harbwr i'r Hen Goleg yn Aberystwyth.
- £379k o gyllid gan Lywodraeth Cymru i gefnogi amrywiaeth o brosiectau i ailddefnyddio asedau canol trefi at ddibenion economaidd ac i wella seilwaith gwyrdd yng nghanol trefi, Mae'r buddsoddiad yn cynnwys prynu 10/11 Sgwâr Harford yn Llanbedr Pont Steffan, a datblygu prosiect Seilwaith Gwyrdd yn Stryd y Farchnad, Llanbedr Pont Steffan. Caiff buddsoddiadau eu trafod a'u llywio gan y Panel Datblygu Asedau a'r Grŵp Datblygu, ac maent yn cyd-fynd â'r Rhaglen Datblygu Asedau y cytunwyd arni drwy'r strwythur uchod ac sy'n cael ei diwygio'n flynyddol.
- Mae nifer o brosiectau Creu Lleoedd Trawsnewid Trefi Llywodraeth Cymru a phrosiectau strategol wedi'u sicrhau ar gyfer amrywiaeth o bartneriaid yng Ngheredigion. Cwblhawyd Canolfan Creuddyn, prosiect Cymdeithas Tai Barcud yn Llanbedr Pont Steffan yn ystod haf 2021. Sicrhawyd cyllid hefyd ar gyfer prosiect i adnewyddu neuadd y farchnad hanesyddol yn Aberteifi, ac mae gwaith yn mynd rhagddo ar y prosiect uchelgeisiol a phwysig hwnnw.
- Sicrhawyd dros £250,000 i wella mynediad i asedau naturiol Ceredigion drwy Grantiau Gwella Mynediad a'r rhaglen Lleoedd Lleol ar gyfer Natur.
- Mae gwaith yn parhau ar ddatblygu prosiectau'n fanwl i sicrhau rhan o gyllid Bargen Twf Canolbarth Cymru a negodwyd gan bartneriaeth Tyfu Canolbarth Cymru rhwng Cynghorau Sir Ceredigion a Phowys. Llofnodwyd Cytundeb y Fargen Lawn ar gyfer rhaglen buddsoddi cyfalaf gwerth £110m gan Lywodraeth Cymru a Llywodraeth y DU ym mis Ionawr 2022, gan baratoi'r ffordd ar gyfer datblygu a chyflawni prosiectau ledled y rhanbarth. Yng Ngheredigion, cyflwynwyd Achosion Amlinellol Strategol ar gyfer buddsoddiadau yn yr Harbwr yn Aberaeron a Chanolfan Arloesi Gweithgynhyrchu Bwyd yng Nghanolfan Bwyd Cymru, Horeb.
- Gyda chefnogaeth cyllid Leader drwy raglen Cynnal y Cardi, mae swyddog Datblygu Trefi wedi'i gyflogi i ymgysylltu â chynrychiolwyr trefi i helpu i hwyluso a chefnogi syniadau i adfywio trefi gwledig Ceredigion.

Blaenoriaeth 3 – Menter
Mae gwaith wedi dechrau ar nifer o fentrau sydd wedi'u targedu at gefnogi twf busnesau newydd a rhai sy'n bodoli eisoes yng Ngheredigion.

- Fe wnaeth cynllun Grant Cyfalaf Bach a ariannwyd gan Lywodraeth Cymru a gyflawnwyd yn gynnar yn 2021 arwain at bron i £500,000 o fuddsoddiad grant mewn busnesau yng Ngheredigion, gan ddenu £631,000 pellach o gyllid gan y sector preifat. Arweiniodd y cymorth at greu 146 o swyddi newydd yng Ngheredigion, a diogelwyd 408 o swyddi eraill mewn 81 o fusnesau drwy'r buddsoddiadau. Sicrhawyd pecyn cyllido pellach gwerth £173,000 ar ddechrau 2022, gan arwain at drosoli gwerth £250,000 o arian cyfatebol gan y sector preifat ar draws 10 busnes yng Ngheredigion, gan greu 35 o swyddi newydd a diogelu 86 swydd.

- Roedd y cynllun hwn yn dilyn rhaglen 2 flynedd o fuddsoddiadau gwerth £500,000 fel rhan o raglen Arfor i gefnogi a chryfhau'r cysylltiadau rhwng twf economaidd a'r iaith Gymraeg. Ar hyn o bryd, mae Llywodraeth Cymru yn cytuno ar fanylion rhaglen Arfor arall gwerth £11m ar draws 4 sir sy'n rhan o ardal Arfor (Ynys Môn, Gwynedd, Ceredigion a Sir Gâr).

- Mae Cynnal y Cardi yn parhau i gefnogi gweithgarwch adfywio cymunedau gwledig o'r gwaelod i fyny drwy brosiectau peilot, astudiaethau dichonoldeb, hwyluso, gweithgareddau rhwydweithio a hyfforddiant a mentora. Ers dechrau'r cynllun, mae tua 70 o weithgareddau wedi'u cefnogi. Mae enghreifftiau o rai, sydd ar y gweill ar hyn o bryd, yn cynnwys:

    - "Ceredigion360," dichonoldeb i ddarganfod a oes awydd i greu a chynnal gwefannau ardaloedd lleol bywiog, cynaliadwy ar draws ardaloedd o Geredigion;
    - Gwaith dichonoldeb i'r cyfleoedd i ddatblygu "Canolfan Tir Glas" ar gampws Prifysgol Cymru Y Drindod Dewi Sant yn Llanbedr Pont Steffan;
    - Treialu cynllun oergell gymunedol yn Aberporth;
    - Treialu dysgu dwyieithog, digidol yn yr awyr agored drwy ddatblygu cyrsiau mewn coetiroedd;
    - Cefnogi gyda gweithgareddau ymgysylltu ac archwilio dichonoldeb menter gymunedol Tafarn Gymunedol Dyffryn Aeron.

- Mae rhaglen Helix Canolfan Bwyd Cymru yn parhau i gefnogi busnesau bwyd yng Ngheredigion a thu hwnt gyda gwybodaeth dechnegol i alluogi busnesau newydd i gael eu sefydlu a galluogi busnesau sy'n bodoli eisoes i dyfu.

Blaenoriaeth 4 – Cysylltedd

- **Cysylltedd digidol**

Y sefyllfa bresennol o ran cysylltedd digidol
Cysylltiad ffeibr i'r adeilad (FTTP) – 28.3%

Band eang cyflym iawn (>30Mbps) – 86.3%

Cyn mis Chwefror 2020, pan benodwyd swyddog digidol gan Gyngor Sir Ceredigion, y cyfraddau cysylltedd oedd:
Cysylltiad ffeibr i'r adeilad (FTTP) – 20%
Band eang cyflym iawn (>30Mbps) – 80.6%

Ar ôl cwblhau Rhaglen Cyflymu Cymru disgwylir y bydd 90% o Geredigion yn gallu derbyn +30Mbps

Mae buddsoddiad yn digwydd yn y Sir gyda 4 darparwr rhwydwaith amgen gwahanol yn cynnig prosiectau ffibr ar draws y Sir, gyda thros 20 o ardaloedd prosiect yn cael eu cynnig ar hyn o bryd ac i'w cychwyn yn 2022 a 2023.

Bydd y Rhaglen Ddigidol fel rhan o Fargen Twf Canolbarth Cymru hefyd yn cael effaith ar gyflymu'r broses o gyflwyno ffeibr ar draws y rhanbarth drwy nifer o brosiectau seilwaith.

- **LoRaWAN**

Yn ystod 2021 mae Cyngor Sir Ceredigion wedi cwblhau prosiect i osod 40 o Byrth LoRaWAN ar nifer o asedau'r Cyngor er mwyn creu rhwydwaith LoRaWAN ledled y Sir. Dyma'r rhwydwaith mwyaf helaeth ar draws unrhyw Awdurdod Lleol arall yng Nghymru a'r Awdurdod Lleol cyntaf â darpariaeth ar draws llawer o'r Sir. Yn ogystal â'r Cyngor yn cael mynediad, bydd y rhwydwaith hefyd ar gael i bob busnes, sefydliad a phreswylydd, gyda'r rhyddid i'r rhwydwaith gael ei ddefnyddio yn y modd y maent yn teimlo sydd fwyaf effeithiol.

Mae cydweithrediadau â chyrff y sector cyhoeddus yn cael eu sefydlu ar hyn o bryd i alluogi mynediad i byrth y gall y sefydliadau hyn eu defnyddio i ddatblygu eu prosiectau eu hunain a defnyddio achosion. Drwy wneud hynny, bydd modd amrywio'r defnydd o'r rhwydwaith y mae'r Cyngor wedi'i roi ar waith a sbarduno arloesedd.

- **Trefi SMART Ceredigion**

Mae Cyngor Sir Ceredigion wedi llwyddo i dderbyn cyllid i ddatblygu prosiect i alluogi 'Trefi SMART' yng Ngheredigion. I ddechrau, bydd y prosiect yn cynnwys gosod pwyntiau mynediad wi-fi yn Aberaeron, Llandysul, Llanbedr Pont Steffan, Ceinewydd a Thregaron, ac mae gan Aberystwyth ac Aberteifi systemau ar waith eisoes.

Yn ogystal â darparu 'wi-fi Tref' ar draws pob un o'r Trefi, bydd yr offer yn darparu'r gallu i gasglu data dienw ar nifer yr ymwelwyr, y defnydd o ofod ac amser aros, a bydd yn galluogi Cynghorau Tref a'r Cyngor Sir i gynnal dadansoddiadau i gynorthwyo trefi a busnesau i nodi pa ddulliau sydd orau i wella effeithlonrwydd ac effeithiolrwydd eu busnes. Mae contractwr wedi'i benodi ac mae wrthi'n cynnal trafodaethau gyda Chynghorau Tref ynghylch lleoliadau gosod priodol.

Mae'r Strategaeth Economaidd yn nodi'r uchelgais i ddatblygu a chynnal dull cydweithredol cryf

o ymdrin â thwf economaidd. Mae swyddogion ac aelodau Cyngor Sir Ceredigion wedi ymgysylltu â Llywodraeth Cymru i helpu i ddatblygu'r **Fframwaith Economaidd Rhanbarthol ar gyfer Canolbarth Cymru**, sy'n nodi ymrwymiad Llywodraeth Cymru i ddatblygu cryfderau arbennig Canolbarth Cymru, cefnogi twf economaidd cynaliadwy a mynd i'r afael ag anghydraddoldebau rhanbarthol a lleol, gan gyfrannu at nodau llesiant Cymru.

Meysydd ffocws ar gyfer y dyfodol:

Bydd y tîm yng Nghyngor Sir Ceredigion, gan weithio gyda rhanddeiliaid yn y sector cyhoeddus, y sector preifat a'r trydydd sector, yn parhau i adeiladu ar y gwaith a ddechreuwyd eisoes a grynhoir yn yr adran flaenorol.

O fewn pob un o'r 4 maes ymyrraeth yn y Strategaeth Economaidd, mae heriau sylweddol o hyd i fynd i'r afael â nhw:

i. Pobl: Er bod diweithdra wedi gostwng yn y sir yn dilyn lefel uchel yn ystod pandemig Covid-19, mae'r lefelau'n dal yn uwch nag yr oeddent cyn mis Mawrth 2020, ac mae lefel yr anweithgarwch economaidd yn peri pryder penodol.

ii. Lleoedd: Mae canol ein trefi wedi wynebu amgylchiadau heriol ers mis Mawrth 2020. Er bod swyddi manwerthu yng nghanol trefi yn is nag yr oeddent cyn mis Mawrth 2020, mae llawer o siopau cadwyni cenedlaethol wedi rhoi'r gorau i weithredu, yn enwedig yn Aberystwyth. Bydd y tîm yn canolbwyntio ymdrechion a buddsoddiadau ar gefnogi'r gwaith o ailbwrpasu canol trefi, gan weithio gyda rhanddeiliaid ym mhob un o'r trefi.

iii. Menter: Yn yr un modd â'r rhan fwyaf o Gymru, bu cynnydd yn nifer y mentrau yng Ngheredigion yn 2020, ac er bod y niferoedd wedi gostwng ychydig yn 2021, mae nifer y mentrau gweithredol yn parhau'n uwch nag yn 2019. Fodd bynnag, mae nifer y mentrau sy'n fusnesau canolig (sy'n cyflogi rhwng 50 o bobl) yn parhau'n isel ar 0.61% o gyfanswm y mentrau sy'n cyflogi 7.9% o'r boblogaeth sy'n gweithio a gyflogir ym mentrau Ceredigion (o'i gymharu â 0.83% a 12.7% ar gyfer Cymru). Cyflogir dros 72% o'r boblogaeth sy'n gweithio mewn mentrau micro a bach. Mae hyn yn effeithio ar gynhyrchiant a chyfleoedd datblygu gyrfa.

iv. Cysylltedd: Mae rhai heriau yn parhau o ran sicrhau bod gan fusnesau a thrigolion Ceredigion fynediad at y cyflymderau uchaf a mwyaf dibynadwy o gysylltiad â'r rhyngrwyd.

Mae'r gwasanaeth yn adolygu cyfleoedd yn rheolaidd i ddenu cyllid pellach i allu gweithredu agweddau ar y strategaeth economaidd a'i chydrannau. Un enghraifft gyfredol o'r fath yw'r gwaith cydgysylltiedig sy'n cael ei wneud i sicrhau bod y Gronfa Ffyniant a Rennir mor effeithiol â phosibl er mwyn cyflawni blaenoriaethau Corfforaethol Cyngor Sir Ceredigion ar gyfer twf economaidd.

DIBEN YR ADRODDIAD :	**Rhannu cynnydd ar y gwaith sy'n cael ei wneud i gyflawni'r Strategaeth Economaidd**
Y RHESWM PAM FOD Y PWYLLGOR CRAFFU	Ymgynghorwyd â'r Pwyllgor Trosolwg a Chraffu Cymunedau

WEDI GOFYN AM YR WYBODAETH:	Ffyniannus, a chyfrannodd yn llawn at y broses o ddatblygu'r Strategaeth Economaidd cyn ei chyhoeddi yn 2021. Mae hwn yn gyfle i roi'r wybodaeth ddiweddaraf i'r aelodau am y cynnydd flwyddyn ar ôl ei chyhoeddi.
LLESIANT CENEDLAETHAU'R DYFODOL:	**A oes Asesiad Effaith Integredig wedi'i gwblhau? Os na, nodwch pam** Amherthnasol – cwblhawyd Asesiad Effaith Integredig llawn i gefnogi cyhoeddi'r Strategaeth Economaidd yn 2021 ***Crynodeb:*** **Hirdymor:** **Integreiddio:** **Cydweithio:** **Cynnwys:** **Atal:**

ARGYMHELLIAD: Bod y Pwyllgor Trosolwg a Chraffu Cymunedau Ffyniannus yn ystyried yr adroddiad ac yn rhoi adborth ar y materion a godwyd ynddo.

Y RHESWM DROS YR ARGYMHELLIAD:

Er mwyn helpu i sicrhau bod y camau priodol yn cael eu cymryd i gefnogi twf yr economi yng Ngheredigion.

Enw Cyswllt:	Russell Hughes-Pickering, Arwyn Davies
Swydd:	Swyddog Arweiniol Corfforaethol, Rheolwr Corfforaethol
Dyddiad yr Adroddiad:	6 Gorffennaf 2022

Acronymau:

Atodiadau:

Mae'r dudalen yn wag yn fwriadol

Cyngor Sir CEREDIGION County Council	
ADRODDIAD I'R:	Pwyllgor Trosolwg a Chraffu Cymunedau Ffyniannus
DYDDIAD:	19/10/2022
LLEOLIAD:	Hybrid
TEITL:	Gwywiad Coed Ynn - Diweddariad er gwybodaeth
DIBEN YR ADRODDIAD:	1. Cyfleu i'r pwyllgor y cynnydd a wnaed hyd yma gyda rhaglen ar gyfer y dyfodol sy'n cyflwyno'r hyn a fydd yn digwydd nesaf. 2. Archwilio'r cyfle i sefydlu tîm o fewn yr awdurdod gyda'r peiriannau priodol i ymgymryd â'r gwaith cwympo oherwydd gallai fod yn fwy cost-effeithiol na chontractio'r gwaith allan. 3. Archwilio'r cyfle i ddefnyddio'r sgil-gynnyrch (coed wedi'u cwympo) ar gyfer biomas gan arbed rhagor i'r awdurdod.
Y RHESWM PAM FOD Y PWYLLGOR CRAFFU WEDI GOFYN AM YR WYBODAETH:	Yn y cyfarfod a gynhaliwyd ar 20 Ionawr 2022, cytunodd y Pwyllgor Craffu y dylid cyflwyno argymhelliad unwaith eto i'r Cabinet, fel a ganlyn: Bod astudiaeth ddichonoldeb yn cael ei chynnal i ystyried yr opsiynau ar gyfer gwneud y gwaith hwn yn fewnol, a defnyddio'r sgil-gynnyrch i fwydo biomas yr Awdurdod, a bod hyn yn cael ei adrodd yn ôl wedyn i'r Pwyllgor.

CEFNDIR:

Bydd Gwywiad Coed Ynn yn arwain at brinder a gwywiad hyd at 95% o goed ynn yn y DU, ac mae'r onnen i'w gweld dros ardal eang ledled Cymru a Cheredigion. Mae hyn yn cynnwys y tu allan i goetiroedd ar ffurf gwrychoedd a choed unigol ar hyd ffyrdd, hawliau tramwy cyhoeddus eraill ac mewn mannau cyhoeddus. Mae'r onnen, ochr yn ochr â'r dderwen a'r ffawydden, yn un o'r tri phrif fath o goeden perth sydd gennym.

Y risg yw bod coed marw a'r rhai sy'n cario'r clefyd yn debygol o achosi perygl o ran iechyd a diogelwch i'r cyhoedd, ynghyd â chael effaith sylweddol ar yr economi, yr amgylchedd a'r tirlun.

Mae gwybodaeth fanylach ynghlwm wrth yr adroddiad.

Atodiad 1 - Amserlen a rhaglen y dyfodol

Atodiad 2 - Astudiaeth ar sefydlu tîm o fewn yr awdurdod gyda'r offer a'r peiriannau priodol i wneud y gwaith torri coed sydd ei angen - ymarfer effeithlonrwydd cost.

Atodiad 3 - Astudiaeth ar Gadw a Defnyddio neu Werthu Biomas (pren a/neu naddion pren) sy'n Deillio o'r Prosiect Gwywiad Coed Ynn

LLESIANT CENEDLAETHAU'R DYFODOL:	**A oes Asesiad Effaith Integredig wedi'i gwblhau? Os na, nodwch pam**	Oes
	Crynodeb:	
	Hirdymor:	Helpu i warchod manteision coetiroedd ynn yng Ngheredigion gan sicrhau diogelwch ein dinasyddion.
	Integreiddio:	Adeiladu cadernid economaidd ac amgylcheddol tuag at y clefyd hwn a thuag at blâu a chlefydau eraill.
	Cydweithio:	Arwain ac annog tirfeddianwyr, dinasyddion a'r diwydiant i gymryd rhan mewn gwyliadwriaeth, monitro a gweithredu wrth ymateb i Wywiad Coed Ynn. Sicrhau bod gwybodaeth ar y we ynghylch Gwywiad Coed Ynn yng Ngheredigion yn parhau'n gyfredol.
	Cynnwys:	Cynnal gwyliadwriaeth dargededig, gwneud gwaith maes i gadarnhau damcaniaethau a gallu diagnostig ar gyfer Gwywiad Coed Ynn yng Ngheredigion. Ymgysylltu â gwyddoniaeth dinasyddion i gynorthwyo i adeiladu ar gapasiti iechyd coed a chynorthwyo i fonitro Gwywiad Coed Ynn.
	Atal:	Dynodi coed ynn sy'n wydn yn wyneb y clefyd a'u defnyddio ar gyfer 'stoc had' i ailblannu yn y dyfodol.

ARGYMHELLION:

Diweddariad er gwybodaeth yn unig.

Y RHESWM DROS YR ARGYMHELLION:

Amherthnasol

Enw Cyswllt: Phil Jones

Swydd: Rheolwr Corfforaethol – Gwasanaethau Priffyrdd

Dyddiad yr Adroddiad:	19/10/2022
Acronymau:	GCY - Gwywiad Coed Ynn CGGCY - Cynllun Gweithredu Gwywiad Coed Ynn HDG - Hawl Dramwy Gyhoeddus LlC - Llywodraeth Cymru CLILC - Cymdeithas Llywodraeth Leol Cymru CSSC - Cymdeithas Syrfewyr Sirol Cymru
Atodiadau:	Fel yr amlinellwyd uchod

Mae'r dudalen yn wag yn fwriadol

Appendix 1

Scrutiny report timeline to date

TIMELINE: History

1. Draft, and approval of the Ash Dieback Action Plan

    - 05 December 2019 - Thriving Communities Overview and Scrutiny Committee for information, highlighting the potentially significant risk posed by ash dieback and request support in engaging asset holders in developing a ADAP and thereafter implementing this plan
    - 03 March 2021 ADAP presented to Thriving Communities Overview and Scrutiny Committee to approve the ADAP and to ensure that resources, personnel and financial, are identified for its successful implementation and delivery.
    - 16 March 2021 ADAP presented to Cabinet

2. Survey high priority areas such as schools, playgrounds and principal A and B routes to identify locations of Ash trees and their condition

    - July 2021 High priority sectors surveying commenced
    - September 2021 High priority areas surveying completed
    - December 2021 Schools survey data delivered
    - January 2022 A and B roads survey data delivered

3. Appointment campaign for Ash Die Project Support Officer

    - July/August 2021 Recruitment campaign
    - September 2021 shortlisting, interviews and pre-appointment checks
    - 01 October appointment – Ms Lesley Porter

4. Appointment campaign for Ash Die Back Officer

    - June-August 2021 Recruitment campaign
    - October 2021 shortlisting, interviews and pre-appointment checks
    - 15 November appointment – Mr Norman Birch

5. Contractor framework for ADB work undertaken by Ceredigion

    - February 2022 Tree works contractor framework documents submitted to procurement
    - Autumn 2022 Tree works contractor framework tenders to be invited

- Autumn 2022 Online “meet the buyer” event for prospective contractors to be conducted
- September/October 2022 Tree works contractor framework tendering process to have been completed and contractor awarded

6. Investigation into feasibility of establishment of an “in house” Arboricultural (tree cutting) team within Ceredigion County Council as requested by scrutiny committee – See appendix 02

    - February - June 2022 Investigation commenced and completed

    This entailed gathering significant amount of information, punctuated unfortunately by other demands on resources

7. Investigation into feasibility of recovering part of costs of tree cutting works through retention of biomass (cut timber) by Ceredigion County Council for own use or for sale on to other users, as requested by scrutiny committee – See appendix 03

    - September 2022 Investigation commenced and completed

    This entailed gathering significant amount of information, punctuated unfortunately by other demands on available resources and other priorities.

8. Review survey data and produce a prioritised scheme of work. Works to be prioritise based on a risk assessed approached

    - April 2022 review of survey data commenced
    - May 2022 commencement of ongoing scheme of issuing section 154 notices to landowners
    - June 2022 commencement of inspection of trees at schools
    - July 2022 Appointment of contractor from NMWTRA framework to conduct tree cutting at schools
    - August 2022 Commencement of tree cutting work at schools, to be completed October/November 2022

9. 2022 Survey of A, B, C & Unclassified routes as per ADAP to identify locations of Ash trees and their condition

    - June/July 2022 procurement exemption sought and granted to direct award summer 2022 and ongoing future surveying contracts to the contractor that conducted the 2021 survey - for reasons of continuity of method and consistency in data produced.
    - July/August 2022 award of summer 2022 surveying contract
    - August 2022 commencement of summer 2022 roads survey, to be completed September
    - Survey data to be delivered November 2022

10. Survey of non-highway CCC owned property as designated in ADAP

- August 2022 commencement of survey of CCC owned properties to include:

    - Allotments
    - Car parks
    - Care homes
    - Cemeteries
    - Public open spaces*

    These surveys were conducted by the ADBO and are to be completed September/October 2022

    *Public open spaces to be completed at a later date TBC as more previously unknown CCC owned land comes to light

TIMELINE: Future

1. Contractor framework for ADB work undertaken by Ceredigion

    - 2022/2023 Online “meet the buyer” event for prospective contractors
    - 2022/2023 Tree works contractor framework tendering process to be completed and contractors brought onboard.

    Resource issues within corporate procurement services have delayed this process (proceeding with works at this time by utilising NMWTRA contractor framework contractor)

2. Review summer 2022 survey data and produce a prioritised scheme of work. Works to be prioritise based on a risk assessed approached

    - November 2022 Data to feed into and expand upon current scheme of sending section 154 notices to landowners
    - November 2022 Data to feed into and expand upon current scheme of works to CCC owned trees

3. Continue to lobby Welsh Government and other funding opportunities to address the risk posed by Ash Dieback and identify cost-effective measures of surveying and removing infected trees to minimise the financial impact on both the Council’s and Welsh Government finances

    - CSSW and WLGA are actively lobbying on funding support.
    - Options considered by Ceredigion to include:
        - Contractor retains felled timber in lieu of felling costs

WHAT THE COUNCIL NEEDS TO DO:

3. Analysis of survey data:

- April 2022 – March 2023, prioritise works program of felling trees owned by Ceredigion, as per agreed tree risk matrix
- Prioritise issuing of section 154 notices (Highway & PROW) and section 23 of the Miscellaneous provisions act notices (Council owned & public access land) to private landowners as, per agreed tree risk matrix
- Ongoing - send guidance/advice letters to private owners of lower risk trees, as per agreed tree risk matrix.

4. Manage reactive actions to ADB - Initial advice letter & section 154 notices to landowners (issues raised other than from surveys)

    - Issues raised by members of the public
    - Ceredigion staff
    - Local Councillors
    - Members of the public
    - Other stakeholders

    and deliver this in parallel to prioritised actions to survey data.

Appendix 2
Study on Establishment and Maintenance of an Arboricultural Works Team Within Ceredigion County Council

Summary
This study seeks to investigate the cost of and impact on the authority of the establishment and ongoing maintenance of a new Arboricultural department within Ceredigion in response to the threat from ash dieback disease, the primary use for this team would be for cutting of trees affected by ash dieback disease.

1. Contents

1. Contents
2. Introduction
3. Justification
4. Solution
5. Staff structure and costings
6. Equipment and costings
7. Total costings
8. Cross service impact
9. Comparison with using arboricultural contractors
10. Conclusion
11. Appendices

2. Introduction

2.1. The threat and liabilities from ash dieback disease is well documented in the Ceredigion Ash Dieback Action Plan which contains within it a plan for surveying of trees in areas which pose a risk to the Ceredigion County Council and the greater public and for dealing with any affected trees which are the direct responsibility of Ceredigion County Council by means of a third-party contractor framework which has been drawn up and is currently in procurement.

2.2. This study into the costs and practicability issues associated with establishing and running of a dedicated Arboricultural team within Ceredigion County Council, for the purpose of dealing with the responsibilities and liabilities associated with ash dieback is being undertaken at the request of the Thriving communities Overview and Scrutiny Committee.

2.3. The proposed Arboricultural department would be primarily responsible for cutting of trees growing on land owned, occupied, or managed by Ceredigion County Council.

2.4. In a limited and very small number of cases the proposed Arboricultural department may be called upon to undertake tree cutting on private land, however trees growing on private land are clearly defined in law as the responsibility of the land owner/occupier so this would only be as a last resort in specific circumstances; once all legal routes of compelling a land owner to fulfil their legal responsibilities under section 154 of the Highways Act or section 23 of the Miscellaneous Provisions Act have been exhausted, or if the ownership of any such land cannot be established.

3. Justification

3.1. As detailed in the Ceredigion Ash Dieback Action Plan – ash dieback presents a substantial risk and liability to Ceredigion County Council, it estimates that there are 5000 ash trees which will be the council's responsibility growing on roadsides and 9960 ash trees growing on other land managed by the council, such as:

- 8 Local Nature Reserves or wildlife sites, Council offices, Cemeteries, Care homes, Allotments,
- Public open spaces, Council farms and Other Council estates.
- Additionally, a survey of Ceredigion's schools has identified 749 trees (three times the initial estimate) affected by ADB, however the first round of work on these trees in schools will be completed before an Arboriculture department could be brought online.
- Giving an estimate of approximately 15,210 ash trees which are the councils' direct responsibility, of which 90% = 13,689 trees will be affected by ADB and therefore will likely need cutting.
  Current estimates following work to carried out to date is difficult to quantify but data will be updated on an ongoing basis.
- Section of table from the Ash Dieback Action Plan detailing numbers of ash trees which will be Ceredigion's responsibility:

15210 Trees x 90% mortality = 13689		
Height Category	Percentage in category	No of Trees
<10m	20%	2738
10-20m	67%	9172
>20m	13%	1880

4. Solution

The proposed establishment of an Arboricultural department as a solution to the challenges presented to Ceredigion County Council in the cutting and making safe of trees which fall within its responsibility necessitate the consideration of several issues around the unique nature of the problem:

4.1. Number of trees and their condition

As detailed in the justification in section 3 it is anticipated that there will be in the region of 15,210 ash trees falling under the primary responsibility of CCC, of which 13,689 are likely to need cutting. While this number of trees alone present no small problem it must be understood that the nature of ADB disease is such that affected trees decay rapidly and in such a manner as to render them unpredictable and consequently of higher risk when cutting or felling than are healthy trees.

4.2. Working methods

The higher risk presented by trees with ADB is going to necessitate the altering of the standard approach to working on these trees and the time these operations are going to take in comparison to conventional Arboricultural operations on healthy trees. This will also necessitate the adoption of more innovative solutions in managing these risks, which will reduce or eliminate as far as is reasonably practical the necessity to climb diseased trees –

such as the use of MEWPS (mobile elevated work platforms) and heavy plant mounted tree cutting equipment.

4.3. The main work methods are as follows:

4.3.1. Tree felling from ground level – Where possible, felling of trees at ground level is more efficient in time and resources and carries the fewest inherent safety risks and would be the most desirable method. It will however not always be possible to use this method, due (though not limited to) issues such as:

- The brittleness of these trees preventing use of conventional directional felling aids such as lifting wedges or pull ropes to guide trees in the preferred direction of felling.
- Insufficient unobstructed space to accommodate the felling of whole trees, the presence of underground utilities or infrastructure which would be damaged by falling trees, or proximity to roads etc.

4.3.2. Sectional dismantling of standing trees by means of aerial rope access – A routine and versatile means of removing trees where felling isn't possible. However, the nature of the decay in and brittleness in trees of affected by ADB means that greater caution and more in-depth risk management in climbing affected trees must be employed. Whilst tree climbing of ADB should be a secondary option to the use of mechanical platforms in the dismantling of trees it will still be a valid, practicable and justifiable method where risks can be managed effectively. The practicability will depend on many issues, such as site access and space constraints & tree condition.

4.3.3. Sectional dismantling of standing trees by means of aerial access via MEWP – A preferred method for the safe dismantling of high-risk trees where access and safe working area for the machinery is possible and practicable.

4.3.4. Sectional dismantling of standing trees by means of excavator, crane or telehandler mounted tree cutting machinery – A preferred method for the safe dismantling of high-risk standing trees where access and safe working area for the machinery is possible and practicable and sufficient trees need cutting to justify the transport and use of heavy plant

4.4. Department size and capacity

With consideration to the following factors:

- The afore mentioned number of ash trees in Ceredigions' responsibility.
- ADB being already well established in Ceredigion, resulting in a backlog of trees from before the establishment of the ADB project which need dealing with.
- The disease is accelerating in its infection rate and will continue to do so until the number of ash trees available to infect dwindle by succumbing to the disease.

The proposed department will need a greater capacity in initial years 1 to 5, with the required capacity reducing over years 6 to 10 of the project.

With all these factors in mind the staffing structure numbers and costings detailed in the next section should be viewed as a minimum recommendation of what will be required.

5. Staff structure and costings

5.1. Structure

The structure of the proposed department would consist of a manager and multiple smaller teams of four persons who would work independently on smaller tasks or be brought together to collaborate on larger or more complex operations as and when needed.

5.2. Staffing

The staffing levels costings used in this document are based on commencing with operating four teams in Year 1 due to anticipated recruitment and logistical issues *(See Recruitment issues section 5.6 and equipment procurement Issues section 6.5)*, increasing to five teams in years 2 to 5, four teams in years 6 & 7 and three teams in years 8 to 10 of the ten-year ADB project.

As to how many trees a four-man team can deal with in a day it is advised that the variables are many, for example, size of tree (some are 5m in height, some are greater than 25m), condition, location, weather conditions on the day, etc.

A typical time frame for different sizes of tree are per team per week:

Trees less than10m in height – tens to even hundreds, however they will not be conveniently packaged in nice groups of many small trees together,

Trees between 10 – 15m in height and trees 15 – 20m in height - between 5 to 20,

Trees between 20-25m & greater than 25m in height - in the region of 2 to 10.

An outline of the roles within the department is as follows:

Manager - Grade 10

- Arboricultural operations planning, work scheduling, and logistics.
- Health and safety issues & compliance.
- Team training (internal and external) compliance & scheduling.
- Stand in for team leaders and rescue climbers during absences.
- Equipment procurement, maintenance, and inspection/certification (internal and external).
- Vehicle and plant procurement and maintenance scheduling in conjunction with transport fleet managers.
- Day to day staffing/HR.
- Daily/weekly equipment maintenance.
- Managing budget and reporting.

Team Leader – Grade 9

- The onsite implementation and dynamic development of the work plan, method statement and risk assessment.
- Supervision of staff and tree cutting operations.
- Lead Aerial operative(climber).
- Designated aerial rescuer when others are working off the ground.
- Daily/weekly equipment maintenance as directed by manager.

- One or two of whom to occasionally undertake role of assistant Department manager to cover for managers holiday and/or absence.

Assistant team leader – Grade 8 (one per team)

- Supervision of on ground staff and tree cutting operations when team leader is working off the ground.
- Aerial operative(climber).
- Designated aerial rescuer when others are working off the ground.
- Other tasks as delegated by manager/team leader.

Operative Grade 7 (one or two per team)

- All tree cutting operations as directed by team supervisor dependant on individuals' qualifications – More advanced technical qualifications than grade 6, and/or additional LGV driving licence and/or plant operation qualifications.

Operative Grade 6 (one or two per team)

- All tree cutting operations as directed by team supervisor dependant on individuals' qualifications – Less advanced technical qualifications than grade 7.

Additionally

In addition to the Arboricultural qualifications relevant to the roles detailed above:

- One member of each team would be required to have or gain an LGV driving licence for the purpose using vehicles detailed to each team or for driving a larger LGV with crane which would be available additionally as required.
- Two or more members of the department (spread across more than one team) would need to have or gain suitable heavy plant operating licence/qualifications for using heavy plant available additionally as required.

5.3. Training

Though there would be strict requirements at the application stage for the minimum required qualifications of workers in specific roles, due to the modular nature of the NPTC (National Proficiency Test Council – City and Guilds) Arboriculture qualifications it isn't possible to forecast exactly how comprehensive individual applicants' qualifications are likely to be. For example, A suitably qualified and experienced tree climber may never have had need to undergo training for felling very large diameter trees & an experienced tree feller from a forestry background may never have had cause to have woodchipper training. As the qualifications staff have will have been tailored to previous roles the training costs detailed in the Appendices are an estimate of £600 per worker per year but are likely to be more concentrated during the commencement/early stages of the workers employment with

Ceredigion though an ongoing need for continuous professional development will also need satisfying.

5.4. Employment costs

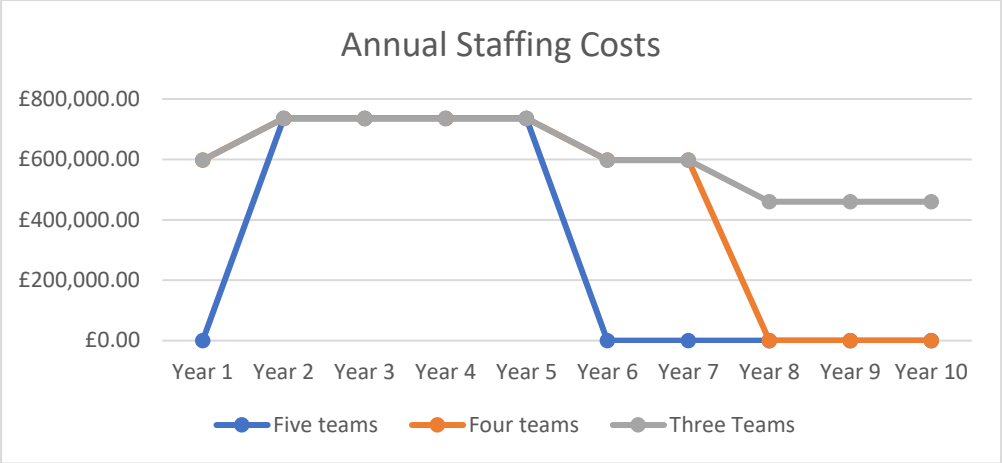
A full breakdown of the cost of employing workers of different skill levels, in different roles, based on current Ceredigion pay scales is detailed in the appendix 01, the totals of these costs are detailed in the following table:

Position	Salary	Annual Employment (salary, NI, pensions, admin etc)	Annual training, refresher, CPD (estimated)	Total
Department Manager Grade 10	£32,234.00	£44,947	£626.67	£45,573.67
Team Leader Grade 9 (1 per team)	£28,672.00	£40,385	£626.67	£41,011.67
Assistant team leader Grade 8 (1 per team)	£24,982.00	£35,713	£626.67	£32,190.67
Operative grade 7 (1 per team)	£22,183.00	£31,564	£626.67	£32,190.67
Operative Grade 6 (1 per team)	£20,092.00	£27,877	£626.67	£28,503.67

5.5. Employment costs over the ten-year duration of the ADB project

The Table and chart Below Illustrate the total annual staffing costs over a ten-year period and ten-year total, detailed costings can be found in Appendix 01.

Year	Five teams	Four teams	Three Teams
Year 1		£597,892.33	
Year 2	£735,970.00		
Year 3	£735,970.00		
Year 4	£735,970.00		
Year 5	£735,970.00		
Year 6		£597,892.33	
Year 7		£597,892.33	
Year 8			£459,814.67
Year 9			£459,814.67
Year 10			£459,814.67
	Total over 10 years		£6,117,001.00



5.6. Recruitment issues

In the current post Brexit and post Covid employment environment, there are well publicised recruitment difficulties across all fields, both authority and nationwide, currently and which look likely to continue for the foreseeable future.

While arboriculture is an attractive career path for those with a passion for trees, it is a very niche industry with a limited pool of qualified workers to draw upon. Any workers we were seeking to employ would be required to have highly specialised skills, qualifications & training, this coupled with a high attrition rate among new entrants could make it difficult to recruit and retain staff in the numbers required.

Also, the greatly increased demands for staff across the industry that Ash Dieback has created further exacerbates this issue. Therefore, though difficult to quantify it is envisaged that we are likely to encounter the same recruitment difficulties that are being faced across the entire Arboricultural industry.

6. Equipment and costings

The distribution of equipment across the department is divided into two categories:
Equipment issued to each team.
Additional Equipment – Specialised, heavier duty or extra equipment - held in storage for utilisation by individual or combined teams as the need arises.
An outline description of these equipment types is as follows while more details and individual costings can be found in the attached appendix A.

6.1. Equipment issued to each team

Vehicles - Single cab pickup truck - 4x4 3.5 tonne gross with high sided tipping body.
Single cab tipper truck - 7.2ton gross; same size vehicle & load volume as a 3.5 tonne truck, with additional weight carrying capacity required to operate legally (LGV licence required).
High sided tipping trailer – 3.5 tonne.
Plant - Tracked woodchipper (200mm capacity) & bespoke transport trailer.
Tools - All tools required by a four-person team.
PPE - All Personal protective equipment required by a four-person team.
Climbing equipment -
Climbing equipment sufficient for one primary aerial operative working by aerial rope access, and one designated secondary/rescue climber).

Rigging equipment –
Rigging equipment sufficient for use by a team of four with one operative working off ground, where there is a requirement to lower tree sections in a controlled manner when inappropriate to free drop sections.
Miscellaneous – Miscellaneous equipment required to support work.

6.2. Additional equipment

Vehicles - 12ton LGV 2x4 High sided tipper lorry with Farsi F65 crane & rotating grab – for the mechanical loading and transportation of large quantities timber and/or woodchip from worksites.
Plant:

- Merlot Roto 50-26 - A 26-meter reach telehandler which rotates through 360 degrees, which can be fitted with a work platform allowing it to be used as a MEWP
- GMT grapple saw/Felling head for Merlot 50-26 **For more information of merlot roto and grapple saw see section 6.3 -"Mechanisation and innovation" below.*
- Tracked MEWP 18-meter reach, and bespoke transport trailer.
- 4x4 Pickup mounted MEWP 13-meter reach.
- 2x4 Chassis mounted MEWP 18-meter reach.
- Avant 600 series compact wheeled loaders – for moving and loading timber.

Tools - Specialist and larger tools for occasional use.
PPE – Additional PPE required by department manager & spares.
Climbing equipment - Additional climbing equipment required by department manager & spares high wear items.
Rigging equipment – Additional heavier duty rigging equipment, extras and spares high wear items.
Miscellaneous – Miscellaneous equipment required to support work.

6.3. Mechanisation & Innovation

As previously discussed, the issues around the increased risks when working on ADB trees will necessitate the adoption of more innovative solutions in managing these risks. Part of this approach will be the utilisation of specialised plant mounted tree cutting equipment that while reducing risk will also increase efficiency. In addition to this, the adoption of timber handling equipment (lorry mounted cranes and compact wheeled loaders) will greatly reduce health risks associated with manual handling whilst also increasing efficiency. Details of these are as follows:

Merlo Roto 50-26 – see Appendix 02
This is a large(16,600kg) road going telehandler that revolves through 360°, has a 26-meter reach, can be used with a working platform as a MEWP, or with cutting attachments for dismantling trees. It can be driven on the road at up to 40kph but for long distances may be more efficient to transport by lorry.

GMT grapple saw - for attachment to the above telehandler.
A combined mechanical grab and saw which is used to grab sections of tree, cut them free then place them on the ground or directly into a chipper, lorry, or trailer.
Please right click on the link below for a video of this grapple saw in use on a telehandler.
https://www.youtube.com/watch?v=9swvf1nYUag

Avant 500/600 series mini loader

These are a small four wheeled articulated mechanical loaders; with a tree grab attached they are used for moving and loading large pieces of timber – reducing the need for manual handling and the work required cutting larger tree sections into smaller pieces for handling. They can be towed on a plant trailer of up to 3500kg on a standard driving licence.

N.B.

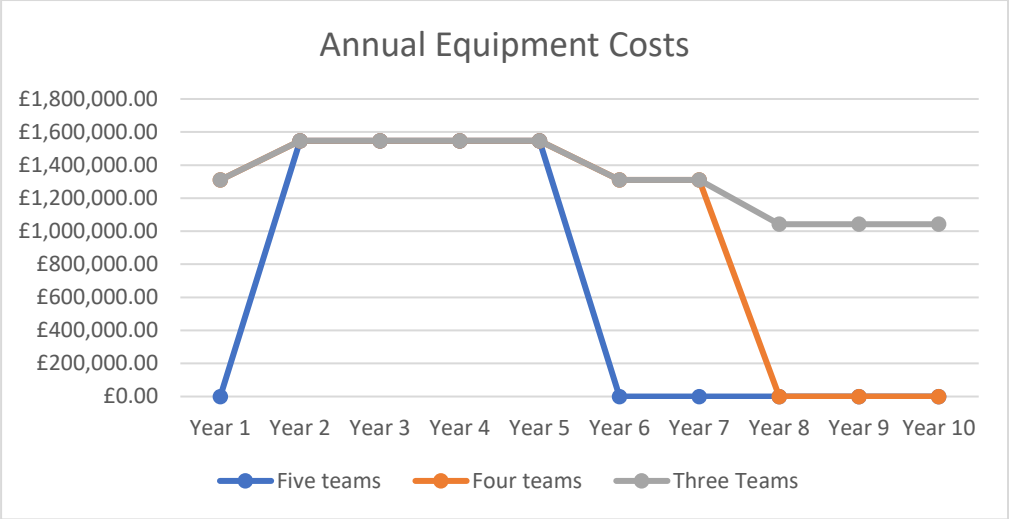
The use of a large (circa 30,000 – 40,000kg) 360° extra-long reach wheeled excavator/materials handler for use with a tree cutting grab was investigated – These machines are manufactured to order and manufacturers order books are currently closed due to difficulties in their supply chains, dealers are therefore unable to provide a quotation of cost, however such a machine would be in excess of £600,000 for the base machine and have a circa £60,000 cost for tree cutting attachments, based on 2020 price. This machine would also require transportation to site by low loader and would likely be too large to operate in confined spaces such as single lane roads.

6.4. Equipment costs over the ten-year duration of the ADB project

Purchase, servicing/inspection & insurance (insurance costs exclude vehicles, which would fall under an existing policy at no extra cost), based on current prices.
Full itemised equipment costs can be viewed in Appendix A.

The Table and chart Below Illustrate the total annual equipment costs over a ten-year period and ten-year totals:

Year	Five teams	Four teams	Three Teams
Year 1		£1,309,254.04	
Year 2	£1,546,723.66		
Year 3	£1,546,723.66		
Year 4	£1,546,723.66		
Year 5	£1,546,723.66		
Year 6		£1,309,254.04	
Year 7		£1,309,254.04	
Year 8			£1,042,353.90
Year 9			£1,042,353.90
Year 10			£1,042,353.90
		Total over 10 years	£13,241,718.45



6.5. Equipment procurement issues

6.5.1. Supply logistics

Current global supply chain issues are causing extended delays in delivery of vehicles and machinery, current lead times for most items range from 8 to 18 months from the date of ordering, while some order books are closed for the next 6 to 9 months or in some cases an indefinite period; some dealers can't confirm now, what will be available in future.

These delays are difficult to quantify before a procurement process has been followed more accurate delay figures would only be available at the point of placing orders but are likely to cause significant delays in the establishment of an Arboricultural department.

6.5.2. Costs

Uncertainty over raw material & manufacturing costs mean it hasn't been possible to obtain quotations for vehicles and plant, therefore all costs for these are current retail prices, all dealers expect these prices to increase over the coming months/years making it virtually impossible to cost things accurately at this stage. Accurate costs would of course be available on placing orders but would likely be based on forecast of prices on the delivery date – if ordering in quarter one or two of 2022, for delivery in quarter one or two of 2023 prices would be based on 2023 prices. Having consulted with Ceredigion fleet management on procurement it is expected that current prices are likely to increase by as much as 40% by the time purchases of vehicles and plant can be made resulting in an additional cost of £5,030,638, bringing total costs for vehicles and plant to £17,607,233.

This will obviously have a substantial impact on the cost of establishing an Arboricultural department.

6.6. Additional costs

Whilst servicing (by Ceredigion fleet services) and replacement purchasing based on current prices is included in the equipment costings, it has not been possible to provide accurate figures on the following items. All of which will depend on usage – with the spread of ash trees across all parts of Ceredigion and the spread of ADB affecting all areas equally vehicles will be accumulating considerable milage but until the project is underway it isn't possible to accurately estimate.

6.6.1. **Repairs and parts**

Usage will to a great extent how frequently spare parts are needed, but as mentioned with vehicle and plant purchasing, spare part supply chains are facing the same uncertainties in both supply and costs.

6.6.2. **Tyres**

Accurate milage estimates will not be possible until the project has commenced, and tyre prices are linked to the global oil market so current prices cannot be relied upon and accurate future estimates cannot be made at this time.

6.6.3. **Fuel**

Accurate milage estimates will not be possible until the project has commenced, and at the time of writing global fuel prices are facing unprecedented increases making accurate future estimates impossible.

6.6.4. **Traffic Management**

All roadside trees which require work from the road will require traffic management. While the equipment costings include road signage and stop-go signs for temporary interruptions, all extensive work conducted from roadways will require the use of outside contractors to provide traffic management.

The number of instances where traffic management will be required will depend on many variables such as the location of diseased trees, but an estimate has been made as in the following table:

Traffic Management	
Estimated roadside trees of CCC responsibility	5000
Estimated No work sites at 4x trees per site where 66.6% of sites require contracted TM	825
Estimated total cost at £400 per site	£330,000.00

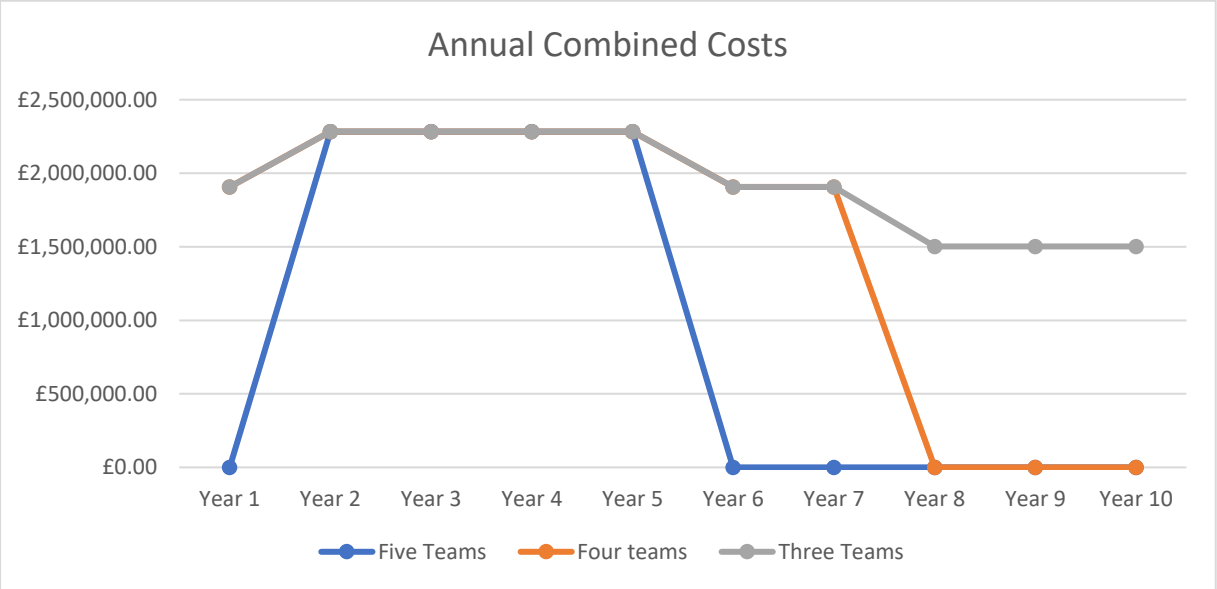
At £400 per site per day for two-way staffed traffic management, this gives a project total of £333,000

7. Total costings

7.1. Combined total costings

A summary of combined total costings – staffing & equipment is shown in the table and chart below, detailed costings can be found in Appendix 01.

Year	Five Teams	Four teams	Three Teams
Year 1		£1,907,146.37	
Year 2	£2,282,693.66		
Year 3	£2,282,693.66		
Year 4	£2,282,693.66		
Year 5	£2,282,693.66		
Year 6		£1,907,146.37	
Year 7		£1,907,146.37	
Year 8			£1,502,168.57
Year 9			£1,502,168.57
Year 10			£1,502,168.57
Traffic management ten-year total			£330,000.00
		Total over 10 years	£19,688,719.45



8. Cross Service Impact

8.1. Fleet Management

8.1.1. Servicing

The added workload placed on the fleet management team of servicing vehicles and plant for an arboricultural department would require recruiting additional fleet technicians and place an additional workload on fleet management administration.

Additional grade 7 technicians cost the authority £31,568 per year to employ, this cost is included in the servicing charges.

8.1.2. Operator's licence

The additional number of large goods vehicles brought to the service by an arboriculture department would exceed the capacity of the fleet operator's licence, this would result in the need to apply to VOSA for an extension to Ceredigion's operator's licence, while this is possible it will present an increased administration workload for fleet management.

9. Comparison with using arboricultural contractors

9.1. Estimated cost of using contractors

The table below, from Ceredigion Ash Dieback Action Plan shows the estimated costs to the council of using arboricultural contractors for cutting of trees which are the councils responsibility, based on costs incurred by other authorities.

Estimate cost of removing diseased Ash trees					
15210 x 90% mortality				13,689	Trees
Height Category	Percentage in category	Unit cost to fell	No of Trees		Cost
<10m	20%	£150	2738		£0.41M
10-20m	67%	£500	9172		£4.58M
>20m	13%	£800	1880		£1.5M
				Total	**£6.49M**

Total cost of works coming to £6.49M where contractors are used, whereas the cost of the establishment and running of an arboricultural department within the council based on the same estimates of the number of trees Comes to almost £19.7M.

Whilst the ADAP is 13 months old and current issues around increased fuel costs would likely increase the contractor estimate, fuel costs do not form part of the arboriculture department costs for afore mentioned reasons so the two costs should remain comparable.

9.2. Logistical & Supply issues

Whilst the logistical and supply issues which are likely to pose an obstacle to establishing an arboricultural department in a timely manner and to inflate further the costs of doing so over a prolonged equipment delivery period, would also be an impediment to any arboricultural contractor sourcing equipment or staff in the same market place, a contractor that is already established would be in a position to protect themselves from these obstacles in ways such as extending the life of their existing equipment whilst waiting for extended delivery delays of new equipment and only facing the challenge of retaining staff rather than recruiting in large numbers.

9.3. Scheduling Flexibility

The long-term strategy of the ADB project is to survey trees during early summer whilst trees should be in leaf(at this time of year ADB is most easily & reliably identified), then commission any work to trees identified in the surveys the following autumn & winter –

outside of bird nesting season. This strategy is more easily achievable when using contractors as we can use them at will and have no obligation to keep them occupied/employed during the spring and summer.
Using an Arboriculture department within the council tree cutting work would need to be scheduled all year round, which would involve carrying out tree cutting during the bird nesting season. Whilst it is legal, possible and on occasion essential to undertake tree cutting operations during the bird nesting season, this practice would place a much greater workload of surveying for bird nests both before commissioning work and again before commencing the work, it is also a far lengthier process relative to autumn & winter surveying to survey for bird nests during the months of the year that trees are in leaf. In short, the use of outside contractors would give the council more flexibility in planning works when it is best suited for the work to take place and a reduced workload in the commissioning process.

10. Conclusion

10.1. It's been shown in this study that financial and logistical implication for CCC of the establishment and maintenance of an arboricultural department are complex, varied and dependant on wide ranging factors, some of which will not of been encountered before; such as the unprecedented complications related to global supply chain disruption and its impact on equipment supply and costs.

10.2. At the time of writing the total ADB project budget over its 10-year duration is £10M of which £6.49M is allocated for the cutting of trees which the council is responsible for by outside contractors, the costs of bringing the work in house, detailed in this study far exceed this figure.

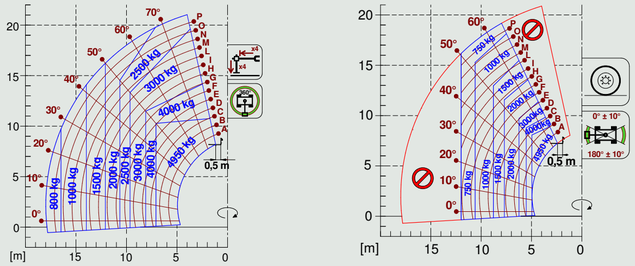
10.3. The recovering of some costs from cutting trees affected by ADB by utilising the timber and chip arising from the cutting of trees affected by ash dieback has been mooted by various stakeholders – Whilst there may be some value to be obtained from this, any benefits from it will be equally available to the council weather tree cutting is undertaken directly by the council or by outside contractors as the current contractor framework which is in the procurement process allows for the retention by CCC of any chip or timber arising from these works. Meaning this process has no impact on this study, so has been omitted. A further study on this could be undertaken.

11. Appendices

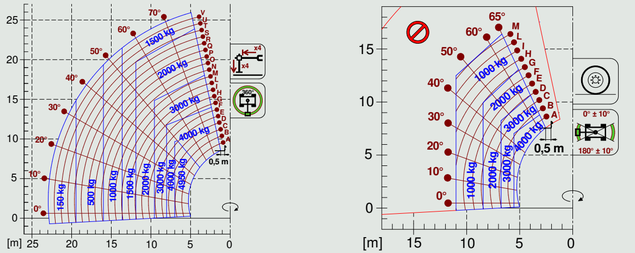
Merlot Roto 26-50 Brochure
Avant 600 series Brochure
Billennium Tracked MEWP Brochure
Tracked MEWP tree work illustration Image
Tracked MEWP tree work illustration Image
4x4 Pickup Mounted MEWP Brochure
Chassis mounted MEWP Brochure

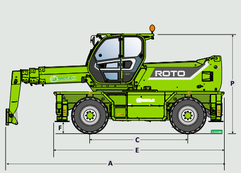
Load Chart

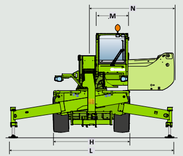
ROTO 50.21 Entry | 50.21 S-Classic | 50.21 S-Plus

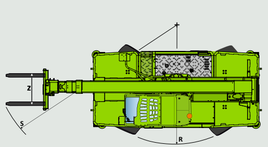


ROTO 50.26 Entry | 50.26 S-Classic | 50.26 S-Plus









Dimensions

ROTO 50.21	A	C	E	F	H	L	M	N	P	R	S	Z
mm	6830	3070	5370	370	2430	5010	1010	2600	3120	3850	6100	850

ROTO 50.26	A	C	E	F	H	L	M	N	P	R	S	Z
mm	7150	3070	5370	370	2430	5010	1010	2600	3120	3850	6310	850

	ROTO Entry		ROTO S-Classic		ROTO S-Plus	
Model	**50.21**	**50.26**	**50.21S**	**50.26S**	**50.21S-Plus**	**50.26S-Plus**
Performance						
Turret rotation	600°	600°	Continuous 360°	Continuous 360°	Continuous 360°	Continuous 360°
Unladen weight (kg)	15800	16600	15800	16600	16500	17300
Maximum load capacity (kg)	4950	4950	4950	4950	4950	4950
Lift height (m)	20,8	26	20,8	26	20,8	26
Maximum reach (m)	18	23	18	23	18	23
Load capacity at max. lift height (kg)	2500	1500	2500	1500	2500	1500
Load capacity at max. reach (kg)	800	150	800	150	800	150
Frame levelling (%)	-	-	+/-12, +/-4	+/-12, +/-4	+/-12, +/-4	+/-12, +/-4
Powertrain						
Engine	Deutz TCD3.6	Deutz TCD3.6	FPT NEF45	FPT NEF45	FPT NEF45	FPT NEF45
Range/Cylinders	3600/4	3600/4	4500/4	4500/4	4500/4	4500/4
Engine power (kW/HP)	55/75	55/75	125/170	125/170	125/170	125/170
Maximum speed (km/h)	25	25	40	40	40	40
Automatic parking brake	Yes	Yes	Yes	Yes	Yes	Yes
HYDRAULIC						
Hydraulic pump	LS + FS	LS + FS	LS + FS	LS + FS	2 - LS + FS	2 - LS + FS
Delivery / pressure (l / min-bar)	103 - 250	103 - 250	135 - 250	135 - 250	140+100 - 250	140+100 - 250
Auxiliary hydraulic service on boom	Yes	Yes	Yes	Yes	Yes	Yes
Cab						
Cab finishing	PREMIUM	PREMIUM	PREMIUM	PREMIUM	PREMIUM	PREMIUM
Cabina FOPS LIV II e ROPS	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Electronic joysti-ck control	Electronic joysti-ck control	Electronic joysti-ck control	Electronic joysti-ck control	Electronic joysti-ck control	Electronic joysti-ck control
Tilting cab	NO	NO	NO	NO	Yes	Yes
Reverse shuttle	Dual reverse	Dual reverse	Dual reverse	Dual reverse	Dual reverse	Dual reverse
Configuration						
Hydropneumatic Suspension EAS Merlo	NO	NO	Yes	Yes	Yes	Yes
Tac-lock	Yes	Yes	Yes	Yes	Yes	Yes
Pre-arrangement for aerial work platform	Yes	Yes	Yes	Yes	Yes	Yes
Standard tyres	18-22.5	18-22.5	18-22.5	18-22.5	18-22.5	18-22.5
Hydraulically controlled stabilizers	Multiposition	Multiposition	Multiposition	Multiposition	Multiposition	Multiposition

MERLO MOBILITY

Always Connected

The Merlo range of telehandlers offers the possibility of using an exclusive technology to make the telescopic handlers even more intelligent and connected. Using the MerloMobility 4.0 CONNECTIVITY SYSTEM, the customer can make the most of the information detected by the machines and gathered in a portal. Merlo Mobility is a flexible tool to optimise the monitoring of your machines as they carry out their various operations.

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masterstudio

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Merlo Spa pursues a policy of continual research and development, and as such, our products may feature characteristics that differ from those described or may be subject to modification without prior notice.
The products illustrated may include optional equipment.

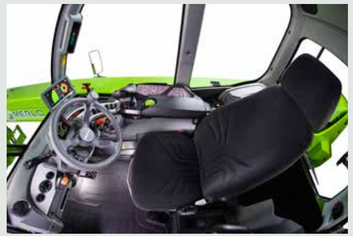
Roto
21-26M

MERLO

Roto

A NEW CONCEPT **OF MOVEMENT**

Great innovations start with simple ideas, like that of the ROTO Range, which has changed the approach to telehandler movement by introducing a revolving turret system capable of rotating 360°, with no need to reposition the machine. The ROTO Range was launched in 1991, and from that moment onward this new concept became increasingly popular on a global scale, to the point that Merlo Group soon became an industry leader.
The new ROTO family marked a new era by introducing new standards in the field of telehandlers for the construction sector, and the product offering was expanded to include three different ranges with different features designed to be increasingly well-adapted to the needs of the various users, such as easy-to-use models for the Rental segment, and Top-of-the-line models equipped with every feature the customer could possibly desire. Today's new ROTO models stand out for their new cabs featuring exceptional comfort, their new "Modular" design concept, and their use of technologies designed to ensure greater safety, improved performance, and unparalleled efficiency.



The 6 key points

1. Practicality
2. Precision
3. Comfort
4. Safety
5. Versatility
6. Efficiency

1 – Practicality
Ease of use and ergonomics are the key words according to which the machine's new controls and management system were developed. The innovative multi-function armrest, made with automotive-style materials, is extremely intuitive to use, and is equipped with automatic systems for positioning the stabilisers. The ROTO model can even be manoeuvred effectively by less experienced operators.

2 – Precision
Everything within hand's reach: the Load Sensing and Flow Sharing hydraulic circuit allows for multiple simultaneous boom movements and rapid turret rotation, without compromising the accuracy of the movements themselves, for precision load positioning. Moreover, the hydrostatic transmission guarantees millimetric precision during machine movements.

3 – Comfort
The ideal work place: the new spacious cab can be anchored to a structure capable of being tilted upwards by 20°, thereby allowing the operator to effortlessly oversee the loading movements. The lower part of the cab is connected using Silent blocks to drastically reduce noise and vibrations. Operational comfort is further improved by the tac-lock system, which allows the tools to be hydraulically clamped with no need to leave the driver's seat.

4 – Safety
Not just sensations: the turret is capable of rotating in continuation (limited to 600 degrees for the "Entry" version). The standard ASCS automatic load management system, which is equipped with a high definition digital display for viewing the operational and safety parameters, guarantees maximum performance without altering the ROTO model's stability. The S-Classic and S-Plus ROTO models are equipped with an active suspension system designed to compensate for sloping terrain, thereby allowing the materials to be lifted in complete safety.

5 – Versatility
Completely compatible with the wide range of equipment specially designed for Merlo telehandlers and interfaced with the exclusive automatic recognition system. The system for remotely managing the machine's movements via a radio control unit developed by Merlo allows the ROTO models to be operated under various conditions, thereby increasing their versatility.

6 – Efficiency
Simpler and smarter: the range is equipped with engines compliant with the latest emission regulations and with power ratings ranging from 75 to 170HP, as well as an electronically controlled Eco Power Drive (EPD) hydrostatic transmission for reducing the engine's speed whenever high power levels aren't required. Moreover, the dry disc brakes limit the absorption of energy, thereby reducing the machine's fuel consumption.

Roto 21-26 m range

• The ENTRY range provides you with all the essentials

ROTATION600°

The models in the ENTRY range offer you simple power and essential features. Developed to meet the needs of every construction site, of rental companies and large construction companies, ensuring performance and operational savings at the highest levels. ROTO ENTRY 50.21 and 50.26 are easy-to-use machines, ensuring reliability and performance. The 600° rotation, the new high visibility cab, the four wheel drive and steering and the 55 kW - 75 hp engine offer excellent results without compromising performance, comfort and safety.

• The S-CLASSIC range Power and style have a new icon

CONTINUOUS360°

A captivating style with aggressive lines defined by the new Modular design and the new high-comfort cab on which it is possible to install up to 6 LED headlights for uninterrupted operation. The engine complies with the stringent Tier 4B emissions regulations and produces power of 125 kW - 170 hp while maintaining low fuel consumption, as is the tradition for MERLO telescopic handlers. The active suspensions of the front and rear axles make road travel more comfortable and safe even on rough terrain, and ensure perfect levelling of the machine during lifting.

• The S-PLUS range, Comfort and performance that make work easy

CONTINUOUS360°

The models of the S-PLUS series have been designed to offer the maximum technology in terms of efficiency, performance and versatility of use, satisfying even the most demanding operators. The range is made unique by exclusive characteristics like the continuous 360° rotation that allows uninterrupted operation, the calibrated hydraulic system with dual variable displacement pump ("Load Sensing" system), the generous, comfortable cab that incorporates the patented Merlo system for vertical inclination that ensures maximum visibility and ergonomics. The Power train has a 125 kW - 170 hp engine with high power and torque combined with the exclusive Hydrostatic transmission with "EPD" electronic management system that provides the required performance with minimum consumption. The active suspensions of the front and rear axles make road travel more comfortable and safe even on rough terrain, and ensure perfect levelling of the machine during lifting.

Complete machine management

The large 10.1" colour display shows all the machine's operating information. The screens are navigated using the wheel control positioned on the armrest, which can be used to configure the machine's settings, like adjustment of the maximum movement speeds and geometric limitation of the work areas. The information related to machine management is displayed in a simple, intuitive manner. The load diagram screen is updated in real time according to the operating conditions, allowing the instantaneous display of information on safety and stability.

Stabilisers

The stabilisers of the ROTO 21-26 m range are structured to facilitate rapid and safe deployment that can be adjusted based on the operational conditions of the site. The exclusive design of the telescopic stabilisers guarantees the stabilisation from the totally retracted position to maximum extension, managed independently for each of the stabilisers. The load diagram automatically adjusts based on the position and consequent stabilisation area. The standard equipment includes self-stabilisation with automatic levelling that ensures correct positioning of the machine without operator intervention.

AVANT®

600 Series

New concept – top class features

Forerunner in design and technology

Once again AVANT can bring you cutting edge design and innovative technical features in their new concept machine.

AVANT designers listened to our customer requests and have produced a compact, powerful and versatile machine for professional use. We have been succesful in incorporating the best lift capacity and hydraulic output for machine and attachments in this class. In tests, the **AVANT 600** series has already proven its capabilities in all working conditions.

AVANT 600 series offers all this, in right proportions:

- **Size** - enough to handle heavier loads
- **Smoothness** – does not damage lawns, pavings and other sensitive surfaces
- **Efficiency** – both for lifting and attachments
- **Maneuverability** – always needed when working in the yards and gardens
- **Power** – is useful in any work
- **Versatility** – you can do the job by using just one machine

Ergonomics and visibility

Well thought-out AVANT ergonomics

- Ample space even for larger operators
- Easily operated, well-positioned controls
- Excellent feel on both drive and hydraulics controls
- Unrestricted visibility – no need to reach out to see forward or to the side
- Safe and easy access to driver's seat

AVANT driver can see what he is doing and where he is going

Positioned in the front part of the machine, the operator's seat is as close to the attachment as it can safely be.

This, combined with the off center loader boom construction and the low front chassis design, provide wider field of vision, giving unrestricted view of the attachment working.

This great AVANT design improves work efficiency, precision and safety.

AVANT has the lifting capabilities of

AVANT 600 Series – all the advantages of a telescopic handler

The familiar AVANT qualities are excellent lift capacity and strong, robust construction. In addition, AVANT offers unbeatable features:

- Telescopic loader boom gives more lift height and outreach
- Modern off center boom construction guarantees excellent, unrestricted visibility
- Boom self levelling makes load handling quicker and more precise
- Joystick with electric control of telescopic boom and auxiliary hydraulics speeds up work and gives extra comfort
- More safety thanks to the overload warning system
- Articulated design allows precise sideways moving of the load in tight situations

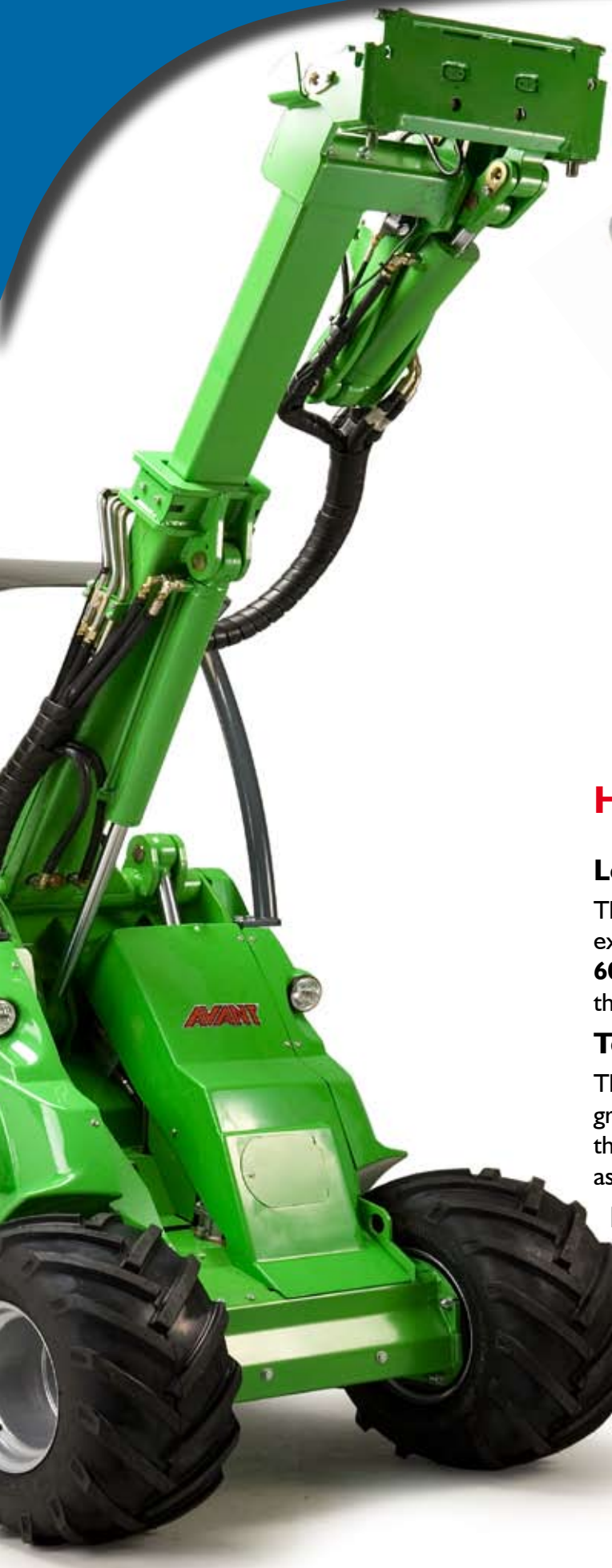
a telescopic loader

Even lifting force in all positions of the loader boom

Thanks to the design of the bucket tilt mechanism the bucket breakout force of **AVANT 600** is the best in its class – and very even throughout the tilting range of the bucket. Tilting angle of the bucket is also adequate, both for filling and emptying.

Lift capacity of the loader boom is big enough for any situation, and it is further improved by the lifting force of the self leveling cylinder. With **AVANT 600** you can safely handle loads up to one tonne.

Stability and safety



Heavy load stability

Low center of gravity

The very low center of gravity of the **AVANT 600** allows excellent sideways stability. In stability tests the **AVANT 600** machines have been tilted sideways to the limit and the results have been conclusive.

Telescopic boom

The telescopic loader boom is an essential part of this great stability. The 600 series design allows you to keep the boom retracted and the load as close to the machine as possible, simply to be extended only when required.

Load sensor

The load sensor comes as standard in the **AVANT 600** series. Audible warning signals are heard if the rear wheels are about to lift off of the ground, warning the operator immediately should he, for example, inadvertently move the load away from the machine with the telescopic boom.

Advanced safety features

Rigid articulation joint

The rigid articulation joint which doesn't swing sideways is a very important feature in a machine of this size. Thanks to this rigid design the risk of tipping over of the machine is essentially smaller, because the rigid rear chassis will not allow the front chassis to tip the machine over. Many AVANT operators already have a lot of positive experience of this feature.

Safety frame

The ROPS safety frame – a standard feature like the tinted plexiglass canopy - of the **AVANT 600** series is a four post structure which really protects the operator, for instance when driving backward and accidentally hitting an obstacle. The ROPS frame and the optional FOPS canopy are tested and certified and comply with the relevant ISO standards.

Three different cab options

Cab means more working hours

AVANT 600 series is availabe with three different cab options:

- Light cab L with windscreen & wiper, right side window and rear window; without door and without heater
- Light cab LX with door and with heater
- Full cab DLX with door, heater, fabric seat, radio and lights

The main objectives in designing the cabs were:

- **Spacious and user friendly**

There is ample space for the operator. All controls are well positioned.

- **Easy access**

Big door and flat even floor guarantee easy access to the cab.

- **Excellent visibility**

Thanks to the big windows the cab does not restrict the field of vision of the operator.

- **Efficient heater (cab LX and DLX)**

The efficient heater keeps windows clear even in bad weather.

- **Safety**

All AVANT cabs are equipped with a tested and certified ROPS safety frame and they comply with the relevant ISO standards – as the regulations require. Also this makes AVANT a safe choice.

available

AVANT Cab L

AVANT cab L is an excellent and economical choice when the operator wants to have protection against rain, wind and snowfall. It improves operator comfort and working conditions considerably.

The cab mounts on the standard 600 series ROPS frame, which means safety is guaranteed. It consists of windscreen (equipped with wiper), right side window and rear window.

AVANT Cab LX

AVANT cab LX is the right solution when a cab with heater is required. The cab LX has all the features of cab L and, in addition, is equipped with a door and a heater, which further improve operator comfort in harsh weather conditions. And for warmer seasons the door and windows can easily be removed if necessary.

The optional headlight, blinker, reflector + beacon kit can be installed both on cab L and LX.

AVANT Cab DLX

The cab DLX is and independent ROPS/FOPS cab that mounts on the machine instead of the standard ROPS frame. It is equipped with a heater, noise isolating interior and fabric seat, radio and cab air filter. The headlight, work light, blinker, reflector + beacon kit is standard feature as well. This allows road traffic registration in some countries, please consult your AVANT dealer for more information.

AVANT cab DLX is spacious, fully equipped and well-lighted and stands comparison with any cab of similar size on the market.

AVANT knows landscaping and

AVANT 600 – the ideal machine for landscaping

Exactly the right size

AVANT 600 series is strong enough to handle heavier loads like stone pallets, big bags etc. On the other hand, it is light enough so that it doesn't damage lawns, pavings and other surfaces.

The compact dimensions of **AVANT 600** mean it can work on any site, and it is easy to transport on a trailer from one work site to another.

Versatile

Perhaps it is the landscaping contractor who needs the most versatile machine. It is a great advantage if one can do many jobs with one single machine: earthmoving and moving of materials, loading and unloading, digging, leveling, milling and even paving. **AVANT 600** is just this kind of machine.

Estate and property maintenance

Versatile property maintenance machine

AVANT 600 series is an excellent machine for property maintenance. The main features for this demanding task are:

Versatility

Thanks to the complete attachment range **AVANT 600** series is a real all-year-round property maintenance machine.

Smoothness

The articulated design and compact dimensions make **AVANT 600** an unbeatable smooth and nimble machine. It can easily tackle tight situations like narrow roads, alleys and curves.

Cab

The spacious cab equipped with efficient heater guarantee comfortable working conditions despite the bad weather.

Drive speed

The drive speed of **AVANT 600** series is sufficient for reasonable driving distances. This makes it a useful machine for contractors who are doing property maintenance jobs.

Efficient material handling

AVANT for efficient material handling

For many companies **AVANT 600** series is an ideal all-year-round forklift truck for outdoors material handling.

AVANT has excellent loading and handling capabilities thanks to the telescopic boom and boom self levelling. In addition, with the same machine you can do various property maintenance jobs like sweeping, mowing, snow removal etc.

Do-it-yourself

Like its smaller siblings the **AVANT 600** series is an excellent machine for various do-it-yourself jobs – be it smaller earthmoving, material handling, landscaping, sweeping, trenching, lawn mowing… only your imagination sets the limits of what the AVANT can do!

Technical data, options

Pulling force

Hydraulic motor	Drive speed	Pulling force
OMT 315	17 km/h	900 kp
OMT 400	14 km/h	1100 kp
OMT 500	11 km/h	1400 kp

Wheels

Wheel size	Width
27 x 8.50 - 15	990 mm
23 x 10.50 - 12	1100 mm
26 x 12.00 - 12	1290 mm

Model	AVANT 630	AVANT 635
Length	2550 mm	2550 mm
Width (with 26x12.00-12 wheels)	1290 mm	1290 mm
Height	2090 mm	2090 mm
Weight	1350 kg	1380 kg
Standard wheels	26x12.00-12" grass/TR	26x12.00-12" grass/TR
Transmission, drive	hydrostatic	hydrostatic
Auxiliary hydraulics oil flow / pressure	44 l/min 200 bar	66 l/min 200 bar
Turning radius inside/outside	900 / 2190 mm	900 / 2190 mm
Max. lifting height (with telescopic boom)	2820 mm	2820 mm
Max. lifting capacity (hydr.)	1400 kg	1400 kg
Max. tipping load*	1100 kg	1100 kg
Max. breakout force / 50 cm	1250 kg	1250 kg
Engine make and type	Kubota D 1105	Kubota V1505
Engine output (ISO Gross)	21 kW (28 hp)	28 kW (37,5 hp)
Fuel	diesel	diesel

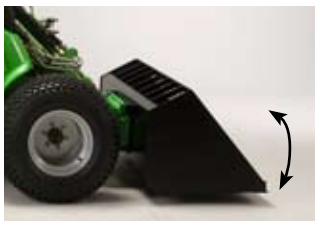
*with counterweights

Add efficiency and comfort to your work with options.

Boom

Telescopic boom

Self levelling boom


Boom floating

Hydraulic quick attachment coupling plate

Cabs

Cab L

Cab LX

Cab DLX

Work efficiency

Joystick

Rear auxiliary hydraulics

Road traffic light kit

Work light kit

Rear side weights, 180 kg

Extra weights, trailer coupling

Rear bumper

Hydraulic rear lift

Heavy duty covers

Tilt adapter

Catalytic converter

Heavy duty wheels

Snow chains

Two auxiliary hydraulics outlets in the front

Multi connector system for attachments

Attachment control switch pack

Drive

Drive release valve

Anti slip valve

Other options

Engine block heater

FOPS canopy

The most comprehensive, high quality attachment range

AVANT attachments have been designed to work as an equal partner on AVANT loaders, following these principles:

Compatibility

Best machine-attachment combination can only be achieved when a good basic machine is fitted with attachments that are specifically designed for this machine. The dimensions, auxiliary hydraulics output and other features of AVANT are in perfect balance with the attachments.

Efficiency

Work efficiency of the attachments is of great importance. AVANT attachments have been designed to give maximum output with the combination loader-attachment.

Durability

Attachments are designed for hard, continuous professional work.

Safety

Special attention has been paid to safety features in attachment design.

Buckets, material handling

General buckets

Width	Capacity	Weight
890 mm	180 l	57 kg
1050 mm	210 l	65 kg
1100 mm	215 l	68 kg
1280 mm	260 l	75 kg
1400 mm	285 l	90 kg

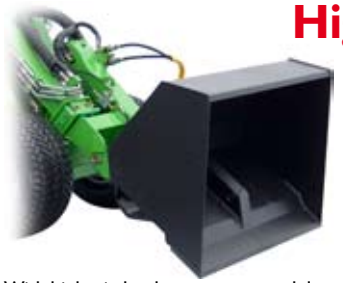
AVANT general buckets are designed to speed up your work and make it more efficient: the operator can see the front edge of the bucket from the driver's seat, which means quick and easy loading and emptying.
There is a grill at the upper end of the bucket which prevents stones from falling towards the operator.

Light material buckets

Width	Capacity	Weight
1050 mm	400 l	95 kg
1100 mm	420 l	99 kg
1280 mm	485 l	105 kg
1600 mm	610 l	125 kg
1800 mm	685 l	137 kg

AVANT manufactures buckets in different widths and volumes, destined for different types of jobs, e.g. light materials handling (saw dust, manure, wood chips, mulch), snow removal etc.

High tip buckets



Width	Capacity	Weight
1050 mm	150 l	129 kg
1280 mm	350 l	160 kg
1800 mm	700 l	330 kg

With hight tip bucket you can reach longer and higher than with many bigger machines. The bucket tips over its front edge, which with the telescopic boom means a dump height of 3,15 m!

4 in 1 buckets

Width	Capacity	Weight
1100 mm	155 l	152 kg
1280 mm	170 l	175 kg
1400 mm	190 l	190 kg

Efficient multi purpose bucket - can be used as a normal bucket as well as a dozer blade, leveler, stone picker etc. The front part of the bucket opens with 2 hydraulic cylinders located on the back side of the bucket, which enables dozing, levelling and picking of stones, tree stumps etc.
The bucket can also be emptied by opening it, which gives more dumping height. Available with straight edge or with teeth.

Skip bucket

Capacity	350 l	700 l
Width	950 mm	1390 mm
Weight	120 kg	175 kg

AVANT skip bucket is a very useful attachment for waste collecting and storage as well. Thanks to the two supports you can leave it where you want, fill it and empty it the AVANT way – sitting on the driver's seat. The bucket can also be equipped with a lid.

Grapple bucket

Width	Weight
900 mm	130 kg
1050 mm	145 kg
1300 mm	165 kg

Grapple bucket combines a normal bucket and a grapple and is therefore suitable for a multitude of jobs. It can be used for transporting and loading of branches, wood chip, compost, straw, manure etc. It can also be used as a normal bucket with the grapple in the upright position.

Dozer blade

Working width	2000 mm	2500 mm
Weight	165 kg	260 kg
Angle	±30 °	±30 °
Blade height	500 mm	520 mm

Equipped with hydraulic blade turning, the AVANT dozer blade is the ideal tool for jobs where the materials must be dozed away quickly. Blade is replaceable; standard blade has straight edge, can also be fitted with rubber or saw-type edge for efficient ice cutting.

Pallet fork

Length	850 mm	1100 mm
Weight	90 kg	105 kg

AVANT pallet fork is the right attachment for lifting and handling of different types of light materials on pallets. Fork width is easily adjustable with quick-release locking mechanism. Forks are made of heat treated tapered steel and they comply with the relevant ISO standards.

Jib boom

Boom length	1020 mm
Hooks	2 pcs
Weight	30 kg

AVANT jib boom is a simple and ingenious attachment: lifting and moving of heavier loads in tight situations is not a problem when you have this jib crane on your AVANT.

Telescoping jib boom

Max. length	1900 mm
Min. length	1300 mm
Lift height	4,7 m
Weight	110 kg

Jib boom is an excellent tool for all kinds of lifting tasks which cannot be done with pallet forks. With the jib boom you can lift materials to higher levels and to places that are difficult to reach; with smooth, exact and safe control of the boom. This jib boom with hydraulic telescope is even more efficient and versatile in all lifting jobs.

Digging and construction

Backhoe 210

Digging depth	2100 mm
Loading height	2000 mm
Slewing	140 °
Buckets	250/400/700 mm
Weight	190 kg

AVANT backhoe 210 is a very compact and amazingly powerful digging unit. It is very quick and easy to mount on the loader (takes only a couple of minutes), and then you have a unit than can work efficiently even in very tight situations. Low weight allows transportation on trailer. Dozer blade at the bottom of the frame is standard feature.

Backhoe 220/250

Digging depth	2200 mm	2500 mm
Loading height	2100 mm	2100 mm
Slewing	180 °	180 °
Buckets	280/400/700 mm	
Weight	350 kg	370 kg

AVANT 220 and 250 backhoes are specially developed for hard professional work, also in tight situations. The slewing angle of both models is full 180°. They are easy and quick to mount on the loader, and a the hydraulically operated locking bar which mounts on the loader chassis ensures stability during operation. In addition, manually adjustable support jacks are standard feature. Hydraulic tilt grading bucket available as an option.

Digger 140

Digging depth	1400 mm	1400 mm
Loading height	2500 mm	2500 mm
Buckets	250 mm	400 mm
Weight	80 kg	90 kg

AVANT Digger 140 is a very efficient and solution for small digging operations where a max. digging depth of 1400 mm is enough. It mounts on the quick attach plate of the loader and is operated by the auxiliary hydraulics control lever. Turning to the side happens by turning the steering wheel.

Trencher

Digging depth	max 900 mm
Trench width	100 - 150 mm

With trencher you can easily dig narrow trenches without damaging lawns and gardens – this trencher is ideal for smaller cable or pipe laying. Digging depth is max. 900 mm, digging width normally 100 mm or 150 mm, depending on chain type. Planetary drive with hydraulic motor guarantee efficient and trouble free operation.Three different types of chains available: standard earth chain, frost chain and heavy duty chain with tungsten teeth.

Auger

	Augers	Max. torque
Direct drive	100 - 300 mm	1355 Nm
HD 35	100 - 400 mm	1886 Nm
HD 45	100 - 600 mm	2452 Nm
HD 58	100 - 900 mm	3017 Nm

Powerful hydraulic auger with many different auger diameters to suit various tasks, be it post hole boring, tree transplanting etc. Planetary drive gives a lot of torque, replaceable teeth (tungsten teeth as standard) and pilot head enable drilling in hard ground and sandstone also. With the optional extension shafts drilling depth can be increased to max. 2,5 m.

Hydraulic breaker

Model	Impact energy	Weight
AVANT B70	112 J	70 kg
AVANT B110	180 J	110 kg
AVANT B160	270 J	160 kg

AVANT breakers are specially designed to give best performance together with AVANT loaders. They are extremely efficient and versatile tools in demolition and refurbishing operations: with the same machine you can do the demolition first and then take the debris away with a bucket – very fast and effective, and you can go almost anywhere with this unit.

Concrete mixing bucket

Volume	270 l
Rotation by	hydraulic motor
Weight	490 kg

AVANT concrete mixing bucket is the ideal attachment for situations where electricity is not available or the mixed concrete must be transported and/or lifted to a place not easily accessible. The concrete mixing bucket is powered by a hydraulic motor and emptying happens by tilting the mixer forward.

Winch

Pulling force	1000 kp
Pulling speed	2,3 m/s
Cable length	30 m
Weight	105 kg

The AVANT hydraulic winch enables towing of all kinds of objects (e.g. logs, poles, boats) from places where you cannot drive with the machine. The winch is equipped with a safety net, 30 m of wire rope and a towing hitch. It is powered by a hydraulic motor, mounts on the attachment coupling plate and is operated with the auxiliary hyraulics control lever.

Log grab

Log diameter max.	500 mm
Weight	60 kg

AVANT log grab mounts on Avant pallet forks. With the log grab you can lift and transport single logs or smaller timber bundles. The grab is equipped with a powerful hydraulic cylinder and it can therefore lift bigger stones and also branches, twigs and similar material.

Leguan 50

Max. allowed load	200 kg
Max. working height	5,0 m
Height (with lowered platform)	1900 mm
Width	1300 mm
Weight	150 kg

The Leguan 50 is mounted directly on to Avants quick attach plate like any other Avant attachment. This makes it fast and easy to mount it on and take it off. The lift is designed according to all access platform directives and it is CE-certified. The safe working load for the lift is 200 kg which means it is allowed for operation with two men or one man with plenty of tools.

Property maintenance

Rotary brooms

Working width	1050 mm	1300 mm
Broom diam.	500 mm	500 mm
Broom mat.	Nylon	
Weight	130 kg	160 kg

AVANT rotary broom is equipped with a floating bracket (allows about 100 mm vertical movement) and three big support wheels in order to follow the contours of the ground. Sweeping angle can be adjusted manually (straight or ±20°) Broom is made of nylon – solid steel or nylon/steel brooms are available as an option.

Brooms with collector box

Working width	1050 mm	1300 mm
Working width with side brush	1350 mm	1600 mm
Waste box volume	170 l	170/200 l
Weight	230 kg	380 kg

AVANT brooms with collector box are specially made for larger yards and street cleaning. Three big support wheels quarantee smooth and easy operation. With the optional side brush cleaning of kerbs and street corners is easy. Collector box emptying is hydraulic – operation with auxiliary hydraulics control lever.

Snow brooms

Working width	1050 mm	1300 mm
Broom diam.	550 mm	550 mm
Broom mat.	Nylon	
Angle adjust.	Hydraulic	
Weight	130 kg	160 kg

AVANT snow broom is destined especially for snow sweeping. It has been designed to give the best possible snow cleaning results even on uneven surfaces. This broom can also be used as a normal rotary broom for all year round sweeping.

Vacuum brush

Width without side brooms	1200 mm
Width with one side broom	1650 mm
Width with two side brooms	2100 mm
Collector box volume	800 l

The vacuum brush is intended mainly for collecting of tree leaves in parks, lawns, yards etc. The powerful vacuum unit sucks the waste first into the vacuum on the bottom of the collector box and then into the box, compacting everything into a tight package. The mouthpiece on the vacuum unit has a brush that loosens also more compacted and wet leaves and waste. Brush rotation speed can be adjusted steplessly.

High pressure washer

Working pressure	200 bar
Water consumption	5-30 l/min
Water tank capacity	270 l
Nozzles	8 pcs

This efficient hydraulic washer is fitted with a 270 l water tank. Max. water pressure is 200 bar, water use is adjustable. Equipped with an adjustable 8 nozzle bar for street washing. A hand held washing gun with 15 m hose roll is standard equipment as well.

Tipping trailer

Load capacity	1200 kg	1800 kg
Width	1125 mm	1350 mm
Length	1710 mm	2240 mm
Tyres	23x8,50-12	26x12-12
Side height	280 mm	560 mm

AVANT tipping trailer is available in two models: with carrying capacity of 1200 kg or 1800 kg. Both are equipped with hydraulic tipping. All sides can be removed if necessary. Extra side set is available as an option for the smaller model, on the bigger model it is standard. **ATTENTION!** The loader must be equipped with the rear auxiliary hydraulics outlet and trailer coupling.

Sand spreader

Working width	1500 mm
Capacity	500 l
Operatio	with hydraulic motor
Weight	250 kg

A hydraulic sand spreader for fast and efficient sand spreading. Front mounting allows loading from ground level in the same way as with normal bucket. Powered by hydraulic motor and equipped with a mixer axle, which prevents the sand from clogging up. The mixing axle and spreading axle are protected against larger rocks with a net.

Snow plow

Working width min. and max.	1800 mm 1600 mm	2200 mm 1850 mm
Blade height	600 mm	600 mm
Plowing angle	±35 °	±35 °
Weight	240 kg	270 kg

AVANT snow plow is the right attachment for efficient snow removal. It consists of two independently adjustable blades. Both blades are spring released and follow very well the contours of the ground thanks to the floating design of the mounting bracket. Angle of each blade can be adjusted separately with electric control switch.

Centrifugal spreader

Spreading width	0,8-6 m
Volume	250 l
Payload	500 kg
Weight	105 kg

This robust spreader is destined for spreading of sand, gravel, salt and fertilizers. Spreading width and amount are easy to adjust and spreading can be directed just to one side if necessary.

Snow blower

Working width	1400 mm
Chute rotation	270 °
Weight	265 kg

The two phase design (first the auger of the blower takes in the snow, then a separate turbine blows it out) of the AVANT snow blower makes it a very efficient snow removal tool, also with wet and heavy snow. Discharge chute rotation is 200°, powered by hydraulic motor and operated from the driver's seat. Blowing height can be adjusted manually.

Groundcare

Lawn mower 1200

Cut width	1200 mm
Knives	2 pcs
Cut height	25 - 100 mm
Weight	170 kg

AVANT lawn mower is a strong and efficient hydraulic mower deck, equipped with four support wheels. It is a mulching mower, but by removing the mulching blades it can also eject the grass to the side or under the mower. Cutting height can be adjusted independently on each wheel. Thanks to the floating design and big rubber support wheels operation is easy in uneven terrain as well.

Lawn mower 1500

Cut width	1500 mm
Knives	3 pcs
Cut height	25 - 100 mm
Weight	200 kg

The biggest AVANT lawn mower is destined for mowing of larger areas. It is equipped with a floating mounting bracket and four rubber support wheels. This robust mower ejects the grass behind the mower.

Collecting mower

Cut width	1200 mm
Knives	2 pcs
Cut height	25 - 100 mm
Collector capacity	210 l

With the new AVANT collecting mower you can easily do the mowing and collect the clippings. Thanks to its excellent suction power collecting of leaves from the lawns is also possible.

Collecting lawn mower 1500

Cut width	1500 mm
Knives	3 pcs
Cut height	25 - 100 mm
Collector capacity	800 l

Collecting mower designed for professional use with 1500 mm cutting width and 800 liter collector box. The high suction power makes it also possible to collect tree leaves on lawns. The blades cut the grass, tree leaves etc. to a fine mulch which packs tightly into the collector box. Collector box volume is designed to be large enough for professional use also in larger areas. The box is emptied from Avant's driver seat with an electric switch and with the help of Avant's boom the collector can be emptied into a container, skip etc.

Flail mower

Working width	1300 mm	1500 mm
Cut height	30-100 mm	
Number of cutters	36 pcs	42 pcs
Weight	290 kg	315 kg

AVANT flail mower is the right attachment for situations where a normal lawn mower cannot be used and where the cut can be more rough. Cuts efficiently long grass and small scrub and is therefore an ideal tool for road bank mowing and similar jobs. Can be equipped with an extension arm for side mount.

Flail mower with hydraulic boom

Max. outreach	3,5 m
Working width	1,0 m

With the hydraulic boom flail mower you can easily and efficiently mow ditch banks, road sides, embankments and other slopes that are hard to reach. The flail mower is equipped with proportional joystick controls and is operated from the driver's seat.

Edge trimmer

Cutting depth	max. 150 mm
Weight	65 kg

AVANT edge trimmer is a perfect attachment for trimming the edges of a lawn, hedges, flower arrangements etc. It consists of a hydraulically operated trimmer mounted next to a cutting disc. The trimmer levels the cutting edge. Cut depth is adjustable.

Wood chipper

Timber diameter	max. 80/160 mm
Chip length	apr. 13 mm
Weight	300 kg

With the hydraulic AVANT wood chipper you can quickly chip branches, small tree trunks, logging waste, sawmill residue etc. This powerful double-knife disc chipper is equipped with manual wood feeding. Chips can be directed through 360 degrees by turning the chimney.

Log splitter

Log diameter	400 mm	400 mm
Log length	600 mm	1000 mm
Splitting capacity	n. 40 logs/min	
Weight	150 kg	250 kg

AVANT log splitter is equipped with a hydraulic cylinder which pushes the log against the splitting blade. Height of the blade is adjustable, allowing splitting either into two or into four pieces. The splitter has automatic reverse and cylinder stroke can be adjusted with a limit switch. Safety features include a stop switch which prevents operation if the blade cover is not down.

Log cutter/splitter

Log diameter	max. 300 mm
Cutting length	200-500 mm
Sawbar	13"
Weight	265 kg

AVANT log cutter/splitter is a very efficient firewood making machine. It combines a chain saw and a hydraulic log splitter. The log cutter/splitter can be transported with AVANT loader, either mounted on the quick attachment plate in the front or by connecting it to the trailer coupling in the rear.

Landscaping

Rotary hoe

Working width	1300 mm
Working depth	max. 150 mm
Weight	180 kg

AVANT rotary hoe is designed for heavy use, equipped with hydraulic motor and chain drive. Adjustable cultivating depth up to 150 mm - ideal for fine preparation of garden beds, seedbeds, rotovating etc. Can also be equipped with a field roller which makes cultivating depth adjustment easier and levels the cultivated soil.

Stone burier

Working width	1300 mm	1500 mm
Working depth	0-140 mm	
Weight	250 kg	300 kg
Weight with seeding unit	290 kg	350 kg

A professional hydraulic stone burier for preparation of areas to be turfed, seeded or planted. The stone burier cultivates the soil, buries stones and other objects up to 150 mm deep in a single pass, leaving a cultivated and consolidated topsoil. Working depth steplessly adjustable with the rear field roller. Separate seeding unit which mounts on the stone burier is also available.

Rotary harrow

Working width	1220 mm	1400 mm
Width of the field roller	1350 mm	1500 mm
Working depth	0-140 mm	
Weight	220 kg	250 kg

AVANT rotary harrow is an excellent leveler for lawn beds, yards, gardens etc. – for places where the ground needs to be perfectly levelled. It harrows the topsoil only and gives a very nice finish for sowing. Required hydraulics output is lower than that of the stone burier. Working depth is adjusted with the rear field roller which levels the seeding bed during operation.

Leveler

Width	1200 mm	1500 mm
Weight	85 kg	95 kg

A simple and inexpensive but incredibly useful and efficient attachment for levelling larger areas. With AVANT leveller you can easily and quickly level cultivated soil as a prelude to turfing, seeding or planting, and it can be used effectively in sand schools.

Ripper

Width	500 mm
Ripping depth	apr. 300 mm
Weight	50 kg

With the powerful AVANT ripper you can break up ground, pull out roots and rip up compacted ground. Equipped with three replaceable tines, ripping angle can be adjusted with the tilt cylinder of the loader.

Stone installation clamp

Main gripping width	575 - 1245 mm
Total width	990 - 1480 mm
Carrying capacity	400 kg
Weight	230 kg

With the hydraulic installation clamp you can lay paving stones quickly and efficiently. Equipped with adjustable side grippers, hydraulic rotation and ADV pushing off device. Hydraulic control with two hydraulic circuits. Mounts on AVANT jib boom.

Stone grab

Opening width	50 - 480 mm
Inside height	170 mm
Gripper length	420 mm
Capacity	900 kg
Weight	55 kg

The mechanical stone grab is easy to mount on the AVANT jib boom. Thanks to the powerful gripping force it can handle concrete components, kerb stones, natural stones, tombstones etc.

Stump buster

Cutting head diameter	350 mm
Drive shaft length	500 mm
Weight	250 kg

AVANT stump buster is an efficient, easy and safe way for removing tree stumps. It drills big holes in the stump, gradually removing the stump. The three blade cutting head has slow speed and high torque, which means it can be used within confined spaces and pedestrian areas safely.

Grabbing tool

Grab diameter	250-1200 mm
Max. load	650 kg
Weight	95 kg

Grabbing tool is mainly intended for lifting and handling of round objects. It is especially suited for lifting of barrels and plant and tree pots. Grabbing force can be adjusted, which means all kinds of objects can be handled without damaging them. Grabbing tool is equipped with two smaller, rubber padded grabs which allow handling of smaller and more fragile objects as well.

Push Broom

Width	1300 mm
Weight	34 kg

Push Broom is a handy and inexpensive broom for cleaning smaller areas. Push broom has no rotating parts and the idea is to simply push the material in front of the broom. Push broom can also be used when making pavements. By pushing the filler sand sideways across the paving stones the sand will fall nicely between the stones.

Farming

XL Silage fork

Width	Weight
1100 mm	190 kg
1300 mm	200 kg
1500 mm	215 kg

The new XL silage forks are designed for moving large amounts of silage efficiently and comfortably. The upper grapple is equipped with two cylinders and specially formed tines to ensure maximum penetration into hard packed silage. Maximum visibility is achieved through the open design of the upper grapple. All tines are manufactured from heat treated reinforced steel and are easily replaceable thanks to bolt mounting.

Dozer blade for silage fork

Width, main blade	1200 mm
Width, side blade	550 mm
Weight	50 kg

The dozer blade mounts on the silage fork: just drive the fork into the blade and lock it with the upper grapple of the fork. Destined for cleaning of the floors in cowhouses, stables etc. Equipped with one side blade as standard.

Silage dispenser

Volume	650 l
Width	1360 mm
Weight	240 kg

This dispenser bucket is equipped with hydraulically driven elevator in the bottom and discharging to both right or left side. Especially recommended for precision chopped silage and feeding stuffs mixed with feeding mixers. Loading from ground is easy by tilting the bucket forward. Distributes silage to about 10 cows / fill - it takes approx. 10 minutes to distribute silage to 50 cows.

Grain / flour dispenser

Capacity	300 l
Width	1100 mm
Weight	90 kg

AVANT grain dispenser is a 300 l bucket equipped with a hydraulic motor and a Ø 200 mm screw, destined for distribution of flour, crushed grain etc. Discharges to the right side or to the left side.
The edge of the grain dispenser tilts all the way down so that loading from ground level is very easy.

Straw blower bucket

Capacity	665 l
Height	1270 mm
Width	1460 mm
Weight	200 kg

With the straw blower bucket you can distribute straw quickly and easily to the cow stalls by driving with your Avant. The blower fan discharges the material up to 3-4 m distance, depending on engine rpm. The bucket can blow chopped straw, sawdust, turf and small wood chips. The bucket can be equipped, as an option, with a scraper blade which mounts under the bucket, destined for floor cleaning. With the optional side brush one can clean the back part of the stall also. The bucket is available with discharge either to the left or to the right side.

Silage block cutter

Width	950 mm	1280 mm
Weight	175 kg	280 kg
Capacity	n. 250 kg	n. 400 kg

Powerful and robust silage cutter with two hydraulic cylinders, can be used with all AVANT loader models. With the silage cutter you can easily cut silage from silo and take it directly to the cattle. Thanks to the open design of the cutting blade visibility during silage distribution is very good. Cuts about 8 animals' silage at one time. Tines are made of reinforced steel.

Carousel broom

Working width	1000 mm
Broom diameter	1000 mm
Broom material	Nylon
Weight	70 kg

This hydraulically operated broom is a useful attachment when sweeping materials to the side. Rotates in both directions, can be used for various tasks and can be equipped with different types of brooms.

Bale grab

Weight	120 kg
Max bale weight	900 kg
Max. grabber width	1470 mm

With the bale grab you can transport wrapped silage bales, hay bales and other round bales without damaging the bale wrapping. A special grab is available for square bales. Please consult your local Avant dealer.

Horse arena harrow

Width	1350 mm
Weight	240 kg

The horse arena harrow is intended for levelling and loosening horse arena riding surfaces. The harrow has two spring loaded tine rows which will loosen the surface, a leveller that will make the surface completely even and a tilling roller that will compact the ground, leaving a great looking finish to the surface. The harrow will not disturb the lower levels (understructure) of the riding surface. **Attention:** The loader needs to be equipped with single acting rear hydraulics and trailer coupling.

Big bag lifter/transporter

Lifting hook height	1200 mm
Width	1000 mm
Weight	80 kg

With the big bag lifter/transporter you can lift and transport big bags. This simple attachment makes loading of fertilizer or stacking of big bags as easy as it can get.

State-of-the-art manufacturing

AVANT manufactures using the most modern production machinery and methods and benefits from production in series. Quality control, testing and extensive test run for every machine prior to delivery are the essential features of AVANT quality system.

Spare parts

Quick and reliable spare parts service is very important for any machine owner and operator. AVANT distributors have organised spare parts supply from their stock and the factory can deliver most parts overnight.

Resale value

AVANT holds its value very well. Good strong basic construction, reliable uncomplicated design, long experience from all kinds of working conditions worldwide combined with a comprehensive service network and spare parts service quarantee that AVANT is the safe choice.

Familiarise yourself with the wide AVANT loader and attachment range on our website:

www.avanttecno.com

On the website you can also download video clips of the machines at work.
Consult also the website of your local AVANT dealer.

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AVANT has a policy of continuing improvement, and retains the right to change specifications without notice.

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BILLENNIUM QUICK-PRO

CRAWLER TELESCOPIC SPIDERBOOM

PATENT PENDING

B1890 EVO

ALMACRAWLER

BILLENNIUM
B1890 QUICK-PRO

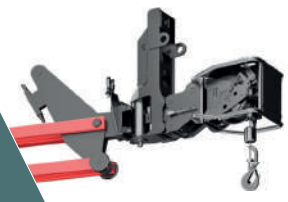
VERSATILITY
EFFICIENCY
CREATIVITY
AGILITY

The Billennium Line features morphologically unique models to provide a superior user experience and greater market adaptability for the real needs of the rental and end-users sector alike.

The new Line is characterized by its unique automatic stabilization systems. There are two different types of stabilization: VISUAL with a single fixed area and the innovative Quick-PRO, a fully automated stabilization system with six different combination.

18mt.
working height

A new concept to work at height... The SpiderBoom!



WINCH KIT 200 KG

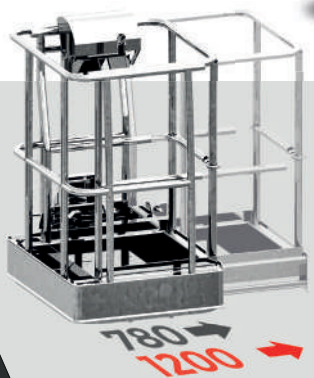
1.4 mt BASKET
STANDARD

1.8 mt BASKET
OPTIONAL

BASKET SIZE

OPTIONAL

TASKET
RESIZABLE BASKET
DISMOUNTING NOT REQUIRED



A resizable basket that allows the operator to manually extend the basket sideways.

The Tasket Basket by AlmaCrawler is the only two-operator basket that does not require disassembly to go through narrow passages, extending from a minimum with of 0.78 m to a full 1.20 m.

XXL

ULTRA EXTENDABLE UNDERCARRIAGE SIZE “XXL”

With a width of 1,39 m, a length of 2.15 m and a height of 0,47 m, these tracks are the longest and widest on the market.

Their size increases the operator's safety when travelling over rough and sloping terrain.

ATS

AUTOMATIC TENSIONER SYSTEM

The track tensioning system is a hydraulic cylinder directly connected to and controlled by the main hydraulic system.

The system creates **zero maintenance** because it ensures the constant and correct tensioning of the track itself.

SPS

SELF-PROPELLED SKILL SYSTEM

The SPS system is what allows the use of the Billennium Spiderbooms even without lowering the stabilizers, leveling longitudinally up to a maximum of 10° with a maximum working height of 9 m (max lateral slope 5°).

This is made possible by the seamless technological mix of proactive and dynamic leveling, the XXL undercarriage and an automatic hydraulic longitudinal leveling of the basket.

PATENT PENDING

EXTRA OUTREACH

AWP

ADAPTIVE WORKING PERFORMANCE

This system calculates the stabilization area in real time by measuring the angle of descend of each individual stabiliser in order to optimise the operational outreach performance over the entire working area up to an extra 0.5 m.

PATENT PENDING

ALMACRAWLER

B1890 QUICK-PRO

Technical data	EVO
Max working height	18,00 m
Max height basket floor	16,00 m
Moving height	9,00 m
Max outreach (load 80 kg)	10,9 m
Max outreach (load 140 kg)	9,8 m
Max outreach (load 200 kg)	8,8 m
Max outreach (load 230 kg or 250 kg)	8,1 m
Rotation angle	+/- 185°
Basket size	1,4 x 0,74 m
Basket rotation angle	+/- 70°
Max basket capacity	250 Kg
Length in stowed position (with detached basket)	5,84 m (5,14 m)
Min width in stowed position	0,79 m
Working width on tracks	1,39 m
Min height in stowed position	1,98 m
Longitudinal leveling by SPS	+/-10°
Max lateral inclination with SPS	+/-5 °
Max gradeability	20°
Max side greadeability	+/-5 °
Maximum stabilisation area	3,65 m x 4,79 m
Stabilisation	Quick-PRO
Drive speed (fast)	2,3 Km/h
Security speed	0,75 Km/h
Non-marking tracks	Yes
Cable Remote LED Consolle or DISPLAY	Yes
ATS, AWP, SPS	Yes
Removable pads	Yes
Weight	
Total weight	~2930 Kg
Power	
Main Power Source	YANMAR 2TNV70 10.2 kW (13.9 HP) @ 3600 rpm
Hydraulic gearmotors	Yes
Electric gearmotors	No
N°2 battery charger 20Ah-48 V	No
Extras - On Demand	
Tasket Basket	0,78 (1,20) x 0,7 m
Wide Basket	1,8 x 0,7 m
Hatz 1B40 Diesel engine	No
Eletric pump 220V-2,2KW / 50Hz (Weight +30 Kg)	Yes
Radio remote display or led controller	Yes
Arctic lubricant for cold climate	Yes
Winch Kit Series 200 kg	Yes
Anticollision System	Yes
Customized powder coating (One Special Colour + BLACK 9005)	Yes

CONTROL DEVICE

Available on all models: LED or DISPLAY radio or remote controller. Both versions have been designed to be user-friendly and allow proportional joystick driving.

LED

DISPLAY

Simplify and centralize the management of all after-sales activities, spare parts purchasing and warranty procedures.

Providing 24/7 access to all technical documents and tools for daily management.

Manage all your ALMAC products in one single online portal.

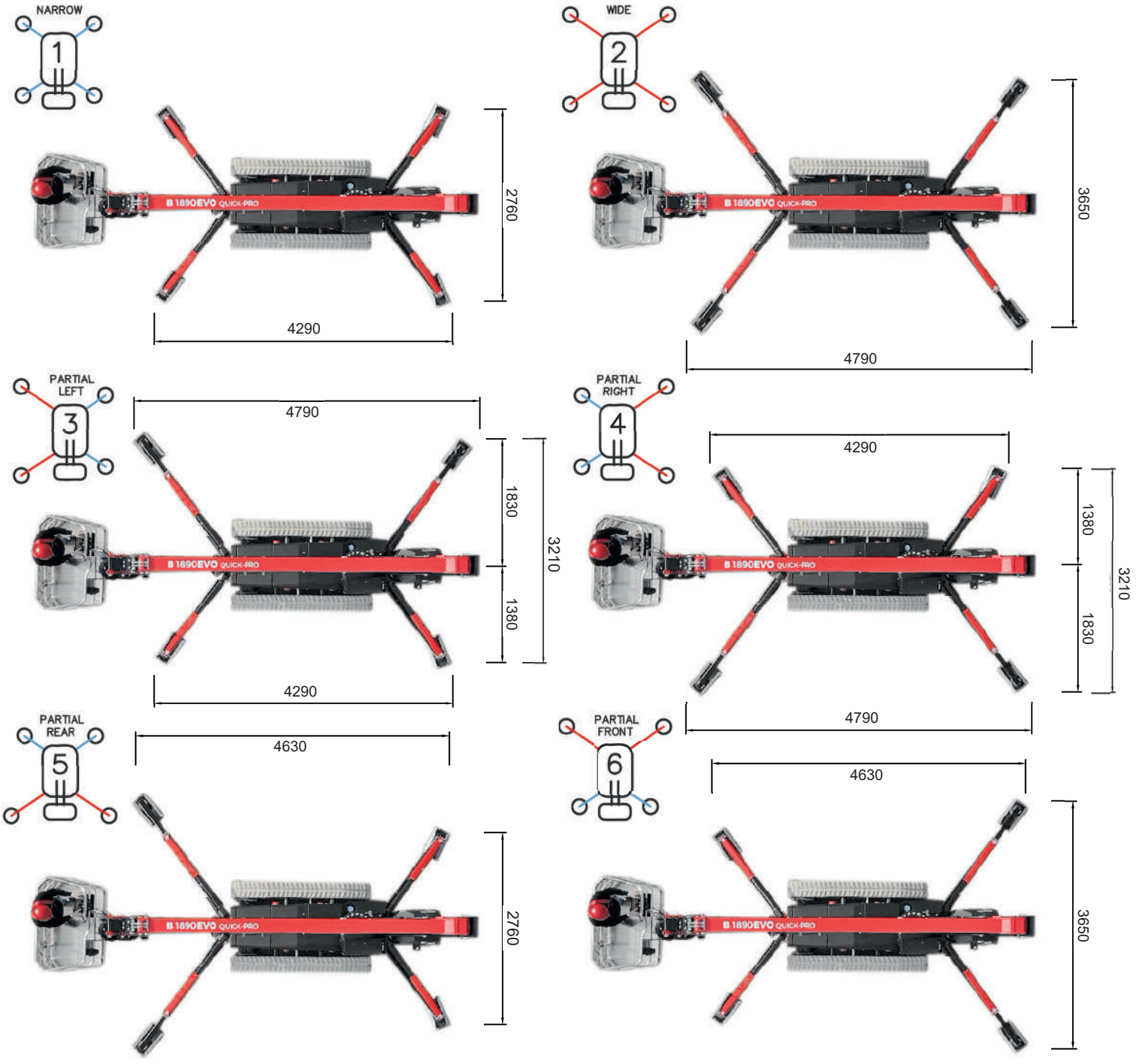
MYALMAC CONTROL PANEL

QUICK-PRO

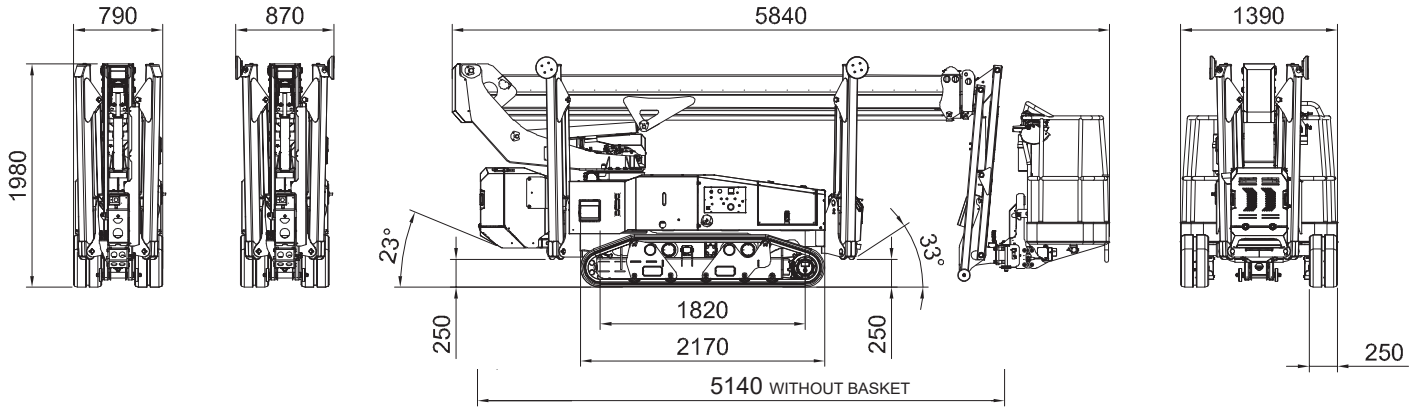
6 COMBINATIONS AUTOMATED STABILIZATION SYSTEM

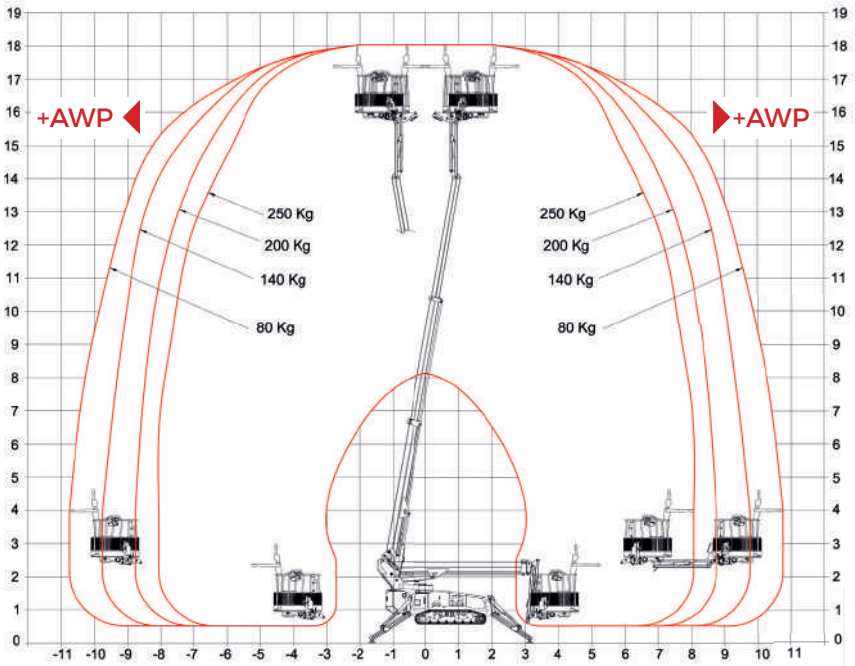
Fully Automated Stabilization with Variable Areas which offers 6 different machine positioning combinations, simple to choose through the appropriate selector; by automatically interacting with the AWP system, it guarantees the operator the best possible outreach performance.

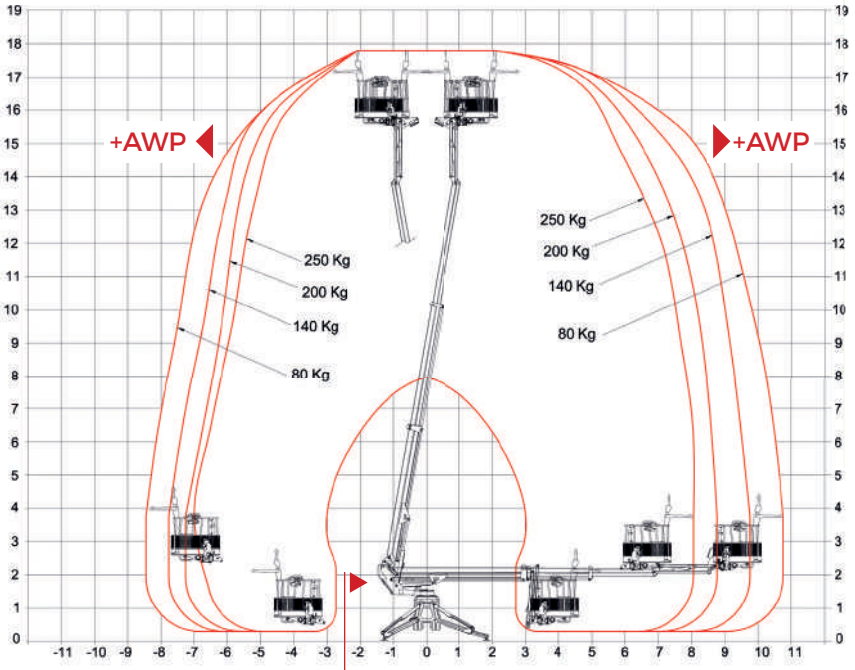
QUICK-PRO SELECTOR

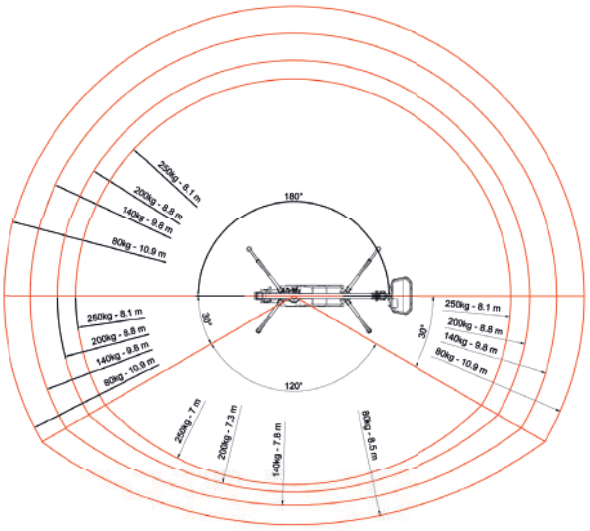


B1890 QUICK-PRO









ALMACRAWLER
Via Caduti sul Lavoro 1
46019 Viadana (MN) - ITALY
+39 0375 83 35 27
info@almac-italia.com
www.almac-italia.com

JIBBI 1250 EVO
JIBBI 1250 EVO
ALMACRAWLER

P130

CPL

AERIAL PLATFORM MOUNTED ON AN ISUZU D-MAX

13.1m
Working Height

Contact us:
CPL
38b Telford Way Ind. Est.
Kettering, Northamptonshire
NN16 8UN. England
Tel. +44 (0)1536 529876
www.cpl-ltd.com

VCA NATIONAL SMALL SERIES TYPE APPROVED

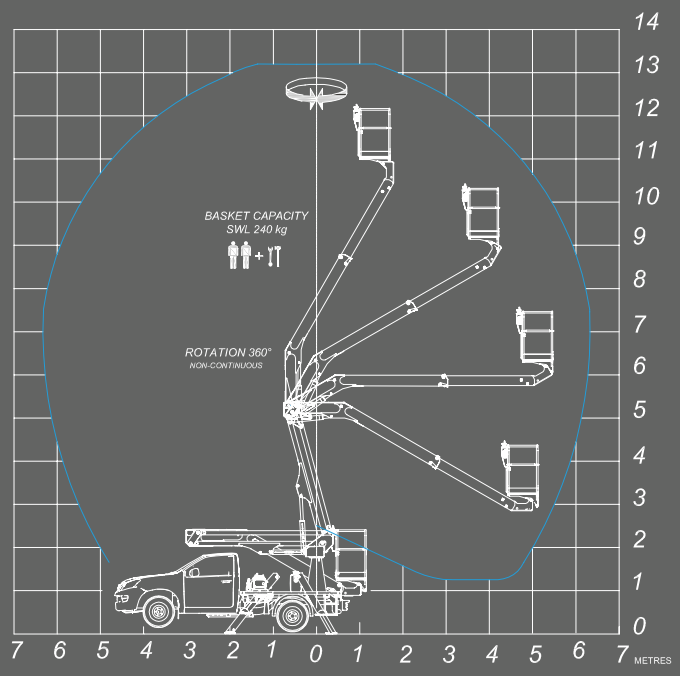
PICK UP AERIAL PLATFORM

Demonstrations upon request

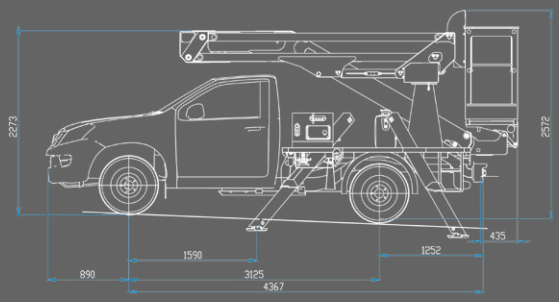
With a constant concern for quality and safety, CPL - Klubb Group reserves the right to modify these characteristics. Non-contractual photos.

P130 Access Platform
mounted on a 3.5t Isuzu D-Max

WORKING DIAGRAM



VEHICLE DRAWING



STANDARD SPECIFICATIONS

- 4 A frame stabilisers
- 2 person plastic basket
- Self levelling basket with manual trim
- Basket access from the ground
- Knuckle remains within the confines of the vehicle envelope
- 5 degree stability
- 1 Kv Insulation protection
- 24 degree departure angle

OPTIONS

- Type approved towbar with 7tn GTW
- Fibreglass walk in basket
- Signalling Devices (Roof beacons, Full beacon set, Chapter 8 markings)
- Reversing camera
- Chapter 8 Graphics
- Secure aluminium lockers
- Key out system
- Parking sensors

For more platform options, please contact us before ordering.

13.1m	6.2m	360° Non-Continuous	240kg	1100 x 660 x 1360mm	Hour counter	≤3.5 T

POSSIBLE TYPES OF VEHICLES

- Isuzu D-Max
- Toyota Hilux

For vehicle options, please contact us before ordering.

KT20

CPL

AERIAL PLATFORM MOUNTED ON A CHASSIS

20.6m

Working Height

Contact us:
CPL
38b Telford Way Ind. Est.
Kettering, Northamptonshire
NN16 8UN. England
Tel. +44 (0)1536 529876
www.cpl-ltd.com

GREEN PACK TECHNOLOGY

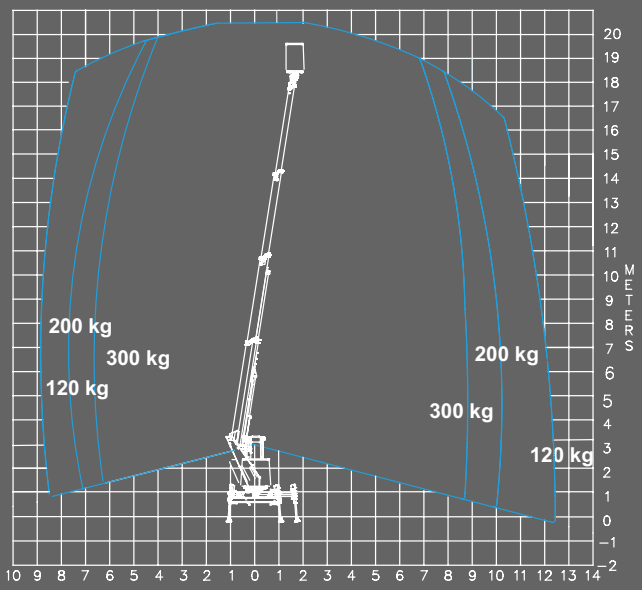
Demonstrations upon request

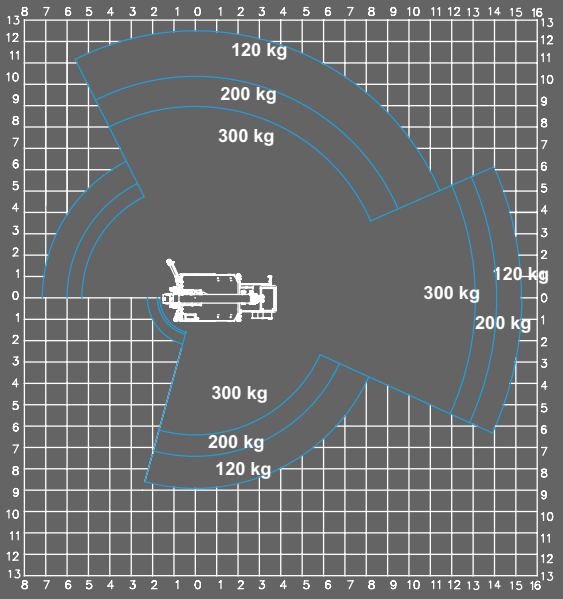
With a constant concern for quality and safety, CPL - Klubb Group reserves the right to modify these characteristics. Non-contractual photos.

ENG

RANGE OF CHASSIS ≤3.5T

KT20 — 20.60m





20.60m	18.60m	Until 12.50m	420°	Until 300kg	125 x 75 110cm	Rotating basket	Four outriggers	Hour counter
(67'7")	*(61'0")*	*(41'0")*						

STANDARD SPECIFICATIONS

- Engine start and stop from basket
- Independent emergency manual pump with all the features in the basket for maximum security
- Proportional controls
- Secure access to the working platform
- Hoses and cables are inside the boom structure for maximum protection
- Double stabilisation:
  - Outriggers in the template for a reduced congestion in the streets (working outreach included)
  - Outriggers extended at the front, left side or right side for a full working outreach
- Aluminium boom for optimum stability

STANDARD SPECIFICATIONS

- Signalling devices (triflash, 2 flashing lights, reflective strips)
- 220V electric socket in the basket
- Trailer hook
- Reinforced suspensions
- Fully opening insulated basket
- Alyuminium chests in the side panels
- Side ladder rack
- Tool holders in the basket
- Green Pack: the platform can be operated with the van engine turned off.

For more platform options, please contact us before ordering

TYPES OF VEHCILES

- Iveco Daily (wheelbase 3750)
- Mercedes 313 CDI (wheelbase 3665)

For vehicle options please contact us before ordering

CPL

CPL - A KLUBB company
Contact us:
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Kettering, Northamptonshire
NN16 8UN United Kingdom
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Appendix 3
Study on Retention and Use or Sale of Biomass (woodchip and/or timber) Arising from the Ash Dieback Project

Summary
This is a report on the practicability of retaining biomass in the form of timber and woodchip arising from tree works undertaken by CCC as part of the ash dieback project for the purpose of recovering funds through the sale of these materials or the offsetting of costs by using woodchip to fuel CCCs existing biomass boilers.

1. Contents

1. Contents
2. Introduction
3. Quantity of biomass arising
4. Options for potentially gaining value from cut ash tree arisings
5. Costings for biomass retention and drying
6. Conclusion

2. Introduction

2.1. The felling/removal of ash trees owned by Ceredigion County Council which become affected by ash dieback disease is necessary due the resulting safety risks.

2.2. Removing these trees will produce a quantity of timber and woodchip and members of the scrutiny committee have asked that the potential of gaining value from these arisings be investigated to possibly offset the costs of the cutting work.

2.3. There are several options for how these arisings could be dealt with which this study will investigate the practicability of.

3. Quantity of biomass arising

3.1. Having had the Ash Dieback Action Plan (ADAP) in place for almost 10 months it is becoming apparent that the initial estimates of the number of trees owned by the council is far fewer than initially estimated within the ADAP, as it is becoming clear that most trees at roadsides are privately owned.

3.2. Where private landowners fail to remove trees when issued with notices by the council requiring them to do so, and the council uses powers to remove privately owned trees, the arisings from these trees would remain the property of the landowner and therefore would not be available for retention or sale by the council.

3.3. It is difficult at this stage to accurately estimate the number of trees which be solely the responsibility of the council, however as the project progresses the number of trees will become more apparent as more surveys and inspections are conducted annually.

4. Options for potentially gaining value from cut ash trees

4.1. Retention of arisings by tree cutting contractors who carry out work for the council.

- The contractor framework for tree cutting operations which is currently in procurement has built into it a facility if the council wishes, for the contractor to credit back part of the costs of the work to the council in exchange for retaining the arisings to process, use or sale by them. The nature of the mini competitions within the framework creates competition for the work which should ensure the amount offered to the Council for the arisings should be competitive.
- This will rely on the contractor honestly & accurately estimating and/or declaring the quantity of arising they are retaining when undertaking works. While this may appear to have potential for abuse - as more contracts are fulfilled a pattern of average quantities of arisings should emerge and can be monitored by the Ash Dieback Officer who will be commissioning the works & on-site spot checks of contractors' work will also be conducted where quantities of arisings can also be monitored.

4.2. Retention of arisings by Ceredigion for sale to biomass processors and users.
This option would require some or all the following:

- Paying the contractors (£ per m^3 per mile) to transport arisings to either a biomass purchaser or to a Council depot.
- Facilities/plant for the storage and handling of arisings when arisings need to be stored at a council depot.
- The establishment and management of a supply contract between the Council and a biomass purchaser.
- If purchasers only require chip and not timber, it would be necessary to process timber into chip at a Council depot with all the infrastructure procurement and management that would entail (see section 5.1 for details).

4.3. Retention of arisings by Ceredigion for processing and drying and use as fuel in Council owned biomass boilers

- These biomass heating systems are located at and used to heat the following:

- Penmorfa Aberaeron
  Heats the Penmorfa offices, Min Y Mor care home and Ysgol Gynradd Aberaeron primary school.
- Plascrug Aberystwyth
  Heats Plascrug leisure centre & swimming pool, and Canolfan Rheidol offices.

- Use as fuel in Council owned biomass boilers would require the following:

  - Paying the contractors to transport arisings to a council depot.
  - Storing woodchip as delivered.
  - Processing timber into woodchip (chipping smaller timber & splitting larger timber into smaller sizes then chipping).
  - Drying woodchip.
  - Storing dried woodchip.
  - Delivering woodchip as required to biomass heating plants.
  - The purchase and installation of extra woodchip storage hoppers and erection of buildings to house them at biomass heating plant locations.
  - See section 5.2 for details/costings
  - Note: The use of retained woodchip to fuel council heating is complicated by the current woodchip fuel procurement arrangements which would need to be retained to ensure continuity of supply.
    - The biomass heating plants can only safely and successfully burn woodchip of very specific specification – size of chip and ratio of leaf & bark matter to clean timber matter(too high of a ratio of bark and leaf will result in damage to heating plant).
    - The current suppliers of chip are paid per kilowatt of heat produced when burnt as opposed to the quantity of chip supplied, council retained chip can't simply be measured and added into the existing storage facilities at the heating plants.
    - The retained supply would need storing in extra purpose-built storage facilities at the heating plants and would need to be burned separately and alternately from the bought in supply and the heat produced from each supply measured separately.

5. Costings for biomass retention and drying

5.1. Process and Costings for processing arisings for sale as in option 4.2

- Requirements
  - Outdoor storage area for whole timber/logs
  - Indoor storage for fresh undried woodchip as delivered from worksites and produced from onsite chipping of large timber.
  - Excavator for mounting tree handling and splitting equipment

        - Mechanical grab for handling timber
        - Mechanical timber splitting cone
    - Large diameter woodchipper
    - Loading shovel/telehandler for moving/loading woodchip
    - Lorry for the delivery of woodchip to boiler sites
    - Operatives to run and manage woodchip drying machinery and process

- Costings:

Initial setup costings of woodchip processing for sale(undried)	
Raw timber handling/splitting	
Excavator 360° 5tonne	£44,500.00
Rotating grab	£3,960.00
Splitting cone	£4,190.40
Chipping	
Large diameter woodchipper	£200,000.00
Loading and delivery	
Telehandler (potentially already be available on site)	TBC
Lorry for delivery of woodchip	£90,000.00
Buildings(many variables TBC - estimated cost only)	TBC
Storage building for undried(green) woodchip	TBC
Total Initial Plant & Buildings expenditure(minus items TBC)	£342,650.40

Annual running costs	
Operatives grade 7 (equivalent of two thirds of a full-time operator)	£21,022.00
Plant running costs	
Excavator 360° 5tonne	£4,605.00
Rotating grab	£2,572.00
Splitting cone	£2,572.00
Lorry for delivery of woodchip and timber	£8,703.00
Vehicle/machinery fuel - DERV	TBC
Total annual running costs(minus items TBC)	£39,474.00

Annual cost of reselling undried chip where cost is spread over 10-year life of ADBP	
Initial set up costs excluding new buildings	£342,650.40
Annual running costs excluding fuel & utilities	£39,474.00
Annual cost where initial cost is spread over 10-year life of ADBP	£73,739.04

5.2. Processing and costings for processing arisings for fuelling biomass heating plants as in option 4.3

- Requirements
  - Outdoor storage area for whole timber/logs
  - Indoor storage for fresh undried woodchip as delivered from worksites and produced from onsite chipping of large timber.
  - Excavator for mounting tree handling and splitting equipment
    - Mechanical grab for handling timber
    - Mechanical timber splitting cone
  - Large diameter woodchipper
  - Loading shovel/telehandler for moving/loading woodchip
  - Woodchip drying plant
  - Biomass boiler to provide heat for woodchip drying plant
  - Indoor storage for dried woodchip
  - Lorry for the delivery of woodchip to boiler sites
  - Operatives to run and manage woodchip drying machinery and process
  - Extra biomass storage and feed in equipment at heating plants and additional buildings to house these.

- Costings:

Initial setup costings of woodchip processing for retention to fuel council heating plants(dried)	
Raw timber handling/splitting	
Excavator 360° 5tonne	£44,500.00
Rotating grab	£3,960.00
Splitting cone	£4,190.40
Chipping	
Large diameter woodchipper	£200,000.00
Woodchip drying	
Biomass boiler, installation & operator training	£90,000.00
Woodchip drying plant	£39,500.00
Container housing boiler and drying plant	£26,000.00
Loading and delivery	
Telehandler (potentially already be available on site)	TBC
Lorry for delivery of woodchip to boiler sites	£90,000.00
Buildings(many variables TBC - estimated cost only)	TBC
Storage building for undried(green) & dried woodchip	TBC
Total Initial Plant & Buildings expenditure(excluding items TBC)	£498,150.40

Annual running costs	
Operatives grade 7 (equivalent of one full time operator)	£31,564.00

Plant running costs	
Excavator 360° 5tonne	£4,605.00
Rotating grab	£2,572.00
Splitting cone	£2,572.00
Large diameter woodchipper	£2,781.00
Woodchip drying plant	TBC
Lorry for delivery of woodchip to boiler sites	£8,703.00
Vehicle/machinery fuel - DERV	TBC
Electricity(drying plant)	TBC
Total annual running costs(minus items TBC)	£52,797.00

Annual cost of retaining dried chip where cost is spread over 10-year life of ADBP	
Initial set up costs excluding new buildings	£498,150.40
Annual running costs excluding fuel & utilities	£52,797.00
Total annual cost	£102,612.04

The cost of purchase and installation of biomass storage and feed in equipment at heating plants and the design and erection of the extra buildings at both council biomass heating plants has not yet been investigated so is to be confirmed but is likely to be considerable.
Whether sufficient space is available for this infrastructure has also not yet been investigated.

6. Evaluation of options

While recovery of costs from and or processing and use of woodchip by Ceredigion County Council is theoretically possible, at one or more sites in the county, it does present numerous challenges which may or may not be justified by potential savings or rewards available through it.

6.1. Option 4.1 will require no initial expenditure on infrastructure and the least input in terms of ongoing management whilst providing a saving on tree cutting costs by crediting back a value for the woodchip against the costs of the tree cutting work. This would also be the most efficient means of gaining value from whilst disposing of arisings from smaller works with smaller quantities of arisings.

6.2. Options 4.2 and 4.3 both require significant initial capital expenditure/investment (some of which isn't possible to cost at this stage), and continual ongoing primary revenue costs in undertaking the processes previously described.

6.3. Options 4.2 and 4.3 will also incur a significant secondary ongoing revenue cost burden for direct management of the process, procurement issues,

finance issues and admin, and heating plant management which are difficult to quantify at this stage.

7. Potential value available from arisings

7.1. Current wholesale market values of biomass are as follows:

- Undried woodchip = £45 per tonne, approximately equal to £16.66/m^3. (One tonne of woodchip would be approximately 2.7m^3 which gives an approximate wholesale cost of £16.66/m^3)

7.2. Option 4.1 while likely to produce the least (revenue equivalence) through savings on tree cutting costs, due mostly to the burden of transport costs and work required to recover value from the arisings being placed wholly on the contractor this may still represent the best overall value and financial risk outcomes to the Council as it requires the least input.

7.3. To generate enough income through option 4.2 or offset enough costs through option 4.3 would require the throughput of a very large quantity of biomass to recover these costs and due to most trees affected by ADB in Ceredigion being privately owned the available council owned trees affected by ADB is likely to be insufficient to recover costs thus posing a high financial risk.

8. Carbon benefits

8.1. Whilst no biomass fuel is truly carbon neutral due to fossil fuel use in its production and transport, the use of biomass arising from the ADBAP can only be viewed as a net carbon benefit due to it displacing fossil fuels in generating energy.

8.2. Whilst the retention of biomass by contractors would not allow the Council to produce its own non fossil fuel, provided the arisings produced find their way into sustainable energy (heat or electric) generation locally the net carbon benefits regarding climate change would likely be the same.

8.3. Transport issues around low carbon fuel can be the difference between it being low carbon or not, and transport issues when considering the geography of Ceredigion can become very complex. Given that if the Council were to process the arisings they would need to be transported from all over Ceredigion in most cases in special trips by our contractors as opposed to being returned to their bases of operation could dramatically dilute the carbon benefits of retaining them, especially if we assume (as is likely) that work in the north or south of the county is likely to be conducted by more northerly or southerly based contractors respectively. This can be assumed as travel costs incurred by contractors are likely to affect tenders for work in different locations.

9. Conclusion

9.1. Where initial capita set up costs are spread over the anticipated 10-year lifespan of the ash dieback project and combined with the annual running costs we arrive at an annual cost of:
£73,739 per annum for selling on undried chip on(Option 4.2)
And
£102,612 Per annum for retaining dried chip for our own use(option 4.3)

Note: These figures are conservative in that they do not include additional building, boiler site storage/infeed plant, fuel costs and utility costs.

To offset these costs with the sale of woodchip or the retention of woodchip to offset heating costs based on a current wholesale chip price of £45/tonne(£16.66/m^3) we would need to have quantities more than the following amounts available from council owned trees:

Processing and sale of undried chip(option 4.2); 1,639tonnes(4,426m^3)
Processing and retention of dried chip(option 4.3); 2,280tonnes(6,159m^3)

9.2. Accurate m^3 tables for volumes of biomass available from deciduous trees of various sizes only exist for plantation forestry grown trees and not for trees growing in the open, on hedges or in unmanaged mixed woodland which are the typical of ash trees owned by the Council. Biomass quantities available can therefore only be estimated based on experience and measurement of individual trees.

9.3. While there are large trees owned by the council which will yield many m^3 of biomass these are the minority of trees, more trees will lie be in medium size ranges and far more still in the smaller size ranges, the biomass yield ranges of which will be from a few m^3 down to a fraction of a m^3. Meaning that obtaining the forecast quantities of biomass required to make the processing and sale or retention of biomass economically viable is far beyond what is available from Council owned trees.

9.4. If we wish to recover some costs of the work which the council will be undertaking the only potentially cost-effective means of doing so would be through gaining credit back for the biomass when retained by our contractors, where this is practicable.

Cyngor Sir CEREDIGION

ADRODDIAD I'R:	**Pwyllgor Trosolwg a Chraffu Cymunedau Ffyniannus**
DYDDIAD:	**19 Hydref 2022**
LLEOLIAD:	**Ar-lein / Hybrid**
TEITL:	**Cynllun Gweithredu Sero Net – diweddariad ar y cynnydd**
PWRPAS YR ADRODDIAD:	**Rhoi diweddariad ar y cynnydd gyda'r camau sydd yn y Cynllun Gweithredu Sero Net**
Y RHESWM Y MAE'R PWYLLGOR CRAFFU WEDI GOFYN AM Y WYBODAETH:	**Cytunwyd y byddai diweddariad ar y cynnydd yn cael ei roi o dro i dro i'r Pwyllgor Trosolwg a Chraffu**

CEFNDIR:
Cytunodd cyfarfod Cyngor Sir Ceredigion ar 20 Mehefin 2019 (Cyngor Llawn, 20 Mehefin 2019) i:

- Ymrwymo i wneud Ceredigion yn Awdurdod Lleol carbon sero net erbyn 2030
- Datblygu cynllun clir ar gyfer llwybr tuag at fod yn garbon sero net o fewn 12 mis
- Galw ar Lywodraethau Cymru a'r DU i roi'r gefnogaeth a'r adnoddau angenrheidiol i alluogi gostyngiadau effeithiol o ran carbon

Yn ychwanegol at hyn, ar 5 Mawrth 2020, cyhoeddodd Cyngor Sir Ceredigion argyfwng hinsawdd byd-eang, gan ymrwymo i ateb yr her fwyaf sylweddol sy'n wynebu ein sir a'n planed.

Cymeradwywyd y Cynllun Gweithredu Sero Net gan y Pwyllgor Craffu (Mai), Cabinet (Mai) a'r Cyngor Llawn (Mehefin) yn 2021 ac fel rhan o hyn cytunwyd y byddai diweddariadau yn cael eu rhoi o dro i dro.

Mae'r ffocws ar hyn o bryd ar y defnydd o ynni ac allyriadau gweithredol (allyriadau Cwmpas 1 a 2), gan fod y rhain yn cael eu cofnodi a'u cyfrif bob blwyddyn fel rhan o'r adolygiad blynyddol o'r Cynllun Rheoli Carbon.

Cyflwynwyd diweddariad cynnydd i'r Pwyllgor Craffu ar y 4ydd o Dachwedd 2021. Mae hwn yn ddiweddariad pellach ar y cynnydd gan fanylu ar yr hyn sy'n cael ei wneud ar hyn o bryd i leihau ein hallyriadau, ac adrodd hefyd ar gyfrifiadau allyriadau 2021/22.

Y SEFYLLFA BRESENNOL:

<u>Ôl Troed Carbon Gweithredol – Y Cynllun Rheoli Carbon</u>

Mae'r ffigurau ar gyfer allyriadau gweithredol ym mlwyddyn ariannol 2021/22 bellach wedi'u cyfrifo a dyma nhw isod:-

Cynllun Rheoli Carbon 3							
	2017/18 t/CO_2	**2018/19 t/CO_2**	**2019/20 t/CO_2**	**2020/21 t/CO_2**	**2021/22 t/CO_2**	**2022/23 t/CO_2**	**CYNLLUN CYFAN**
Adeiladau	5,557	5,177	4,909	4,125	4,613		-16.99%
Goleuadau stryd	518	436	326	255	217		-58.11%
Fflyd	1,867	1,802	1,762	1,602	1,748		-6.37%
Milltiroedd Busnes	761	735	642	180	300		-60.58%
CYFANSWM	**8,649**	**8,150**	**7,639**	**6,161**	**6,878**		**-20.48%**
		-5.77%	**-6.27%**	**-19.35%**	**11.64%**		

Mae'r uchod yn cyfateb i leihad cronnol o 20.48% ar sail targed o 15% (2017/18 hyd 2021/22)

Roedd pob maes gwasanaeth, ac eithrio goleuadau stryd, wedi profi cynnydd mewn allyriadau yn ystod 2021/22 o gymharu â'r flwyddyn ariannol flaenorol. Dyma oedd y duedd oedd i'w disgwyl wrth i adeiladau ailagor yn ystod 2021/22 a Gwasanaethau yn dechrau gweithredu ar lefelau oedd yn nes at yr hyn a fu cyn y pandemig.

Mae'r tabl isod yn nodi allyriadau a chostau fesul categori/gwasanaeth:

Categori		**2019/20**		**2020/21**		**2021/22**	
		tCO_2	**Cost £**	**tCO_2**	**Cost £**	**tCO_2**	**Cost £**
Adeiladau a Goleuadau stryd	Adeiladau Dinesig	502	£289,722	373	£171,490	422	£198,448
	Addysg	2,689	£915,166	2,391	£782,179	2,840	£1,112,639
	Hamdden	523	£191,275	389	£135,156	374	£125,602
	Gofal Cymdeithasol	565	£187,067	510	£164,633	531	£188,155
	Llyfrgelloedd a'r Gymuned	236	£84,074	173	£60,034	173	£69,281
	Adeiladau eraill	232	£90,014	198	£73,793	166	£72,363
	Eraill amrywiol	162	£99,224	91	£37,085	107	£47,805
	Goleuadau stryd	326	£188,917	255	£163,362	217	£163,887
Trafnidiaeth	Fflyd	1,762	£660,763	1,602	£530,142	1,748	£686,026
	Milltiroedd Busnes	642	£1,032,307	180	£297,738	300	£487,102
Cyfanswm		**7,639**	**£3,738,529**	**6,161**	**£2,415,610**	**6,878**	**£3,151,309**

Mae'r tabl uchod yn nodi allyriadau dros dair blynedd i ddangos y duedd o gymharu â'r lefel cyn y pandemig. Fel y gwelir uchod, er bod cynnydd mewn allyriadau yn 2021/22 o gymharu â'r flwyddyn ariannol flaenorol, mae allyriadau yn dal yn mynd ar i lawr yn gyffredinol – maent 9.96% yn is nag yr oeddent yn 2019/20 (cyn y pandemig) a 20.48% yn is nag ym mlwyddyn sylfaen 2017/18.

Yn 2021/22 cyfanswm y gost am ynni a thanwydd a nodwyd ar gyfer cwmpas y Cynllun Rheoli Carbon oedd £3,151,309. Gwariodd Cyngor Sir Ceredigion £735,699 yn fwy ar ynni yn 2021/22 nag y gwnaethont yn y flwyddyn ariannol flaenorol (2020/21) – mae hyn yn cyfateb i gynnydd mewn gwariant o £735,699. Y rheswm pam fod y cynnydd mewn gwariant o ganran uwch na'r cynnydd mewn allyriadau yw bod prisiau contractau wedi cynyddu yn ystod y cyfnod hwn.

Y Grŵp Rheoli Carbon a Newid Hinsawdd – yn dilyn yr etholiadau ym mis Mai mae'r Cynghorydd Keith Henson wedi dod yn Gadeirydd y Grŵp Rheoli Carbon a Newid Hinsawdd.

Mae llawer wedi mynychu'r Grŵp ar ôl diweddaru'r rhestr o'r sawl sy'n mynychu, gyda phresenoldeb gan gynrychiolwyr o bob plaid wleidyddol yn ogystal â mwy o gyfrannu gan swyddogion. Mae'r Grŵp hwn yn gyfrifol am oruchwylio'r gwaith o ddatblygu a chyflwyno'r Cynllun Gweithredu Sero Net gan sicrhau fod yr amcanion hyn yn cael eu cyflwyno ledled yr Awdurdod.

Datgarboneiddio Trafnidiaeth (gan gynnwys gwefru cerbydau trydan) – Yn dilyn cais llwyddiannus am gyllid yn 2021 cawsom £420k o'r "Gronfa ar gyfer Trawsnewid Cerbydau Allyriadau Isel Iawn" sydd wedi'i ddefnyddio ar gyfer datblygu Strategaeth Ceredigion ar gyfer Cerbydau Allyriadau Isel Iawn. Mae hyn yn cyd-fynd â Strategaeth Ynni Tyfu Canolbarth Cymru ar gyfer datblygu rhaglenni gwaith cerbydau ULEV. Dyma gam cyntaf y gwaith a fydd yn gweld peiriannau gwefru cerbydau trydan yn cael eu gosod mewn 9 maes parcio ledled Ceredigion. Mae'r gwaith yn mynd rhagddo a dylai'r pwyntiau gwefru fod ar waith erbyn diwedd mis Hydref.

Mae cais grant ar gyfer seilwaith pellach mewn 8 safle ychwanegol wedi'i gyflwyno i OZEV. Rhagwelir y bydd gwerth y Prosiect tua £280,000 – rydym yn disgwyl am gadarnhad o arian cyfatebol gan Lywodraeth Cymru, a byddwn yn gwario'r arian erbyn diwedd mis Chwefror 2023.

Grant gwefru cerbydau trydan Llywodraeth Cymru/Cymdeithas Llywodraeth Leol Cymru o £300,000. Mae hwn yn benodol ar gyfer gosod peiriannau gwefru cerbydau trydan yn depos y Cyngor i gefnogi'r gwaith o ddatgarboneiddio'r fflyd. Mae'r gwaith o edrych ar y seilwaith sydd ei angen ym mhrif safleoedd depo'r Cyngor ar y gweill ar hyn o bryd.

Mae'r Adolygiad Fflyd a wnaed gan Wasanaethau Ynni Llywodraeth Cymru yn 2020/21 wedi dod i law ar ffurf ddrafft a bydd yn helpu i lywio'r gwaith ynghylch datgarboneiddio'r fflyd.

Mae'r Strategaeth ULEV bellach wedi bod drwy'r broses graffu a'r Cabinet ac ar ôl gwneud ambell i newid bach fe fydd ar gael ar wefan y Cyngor.

Prynu Ynni Gwyrdd – Mae Cyngor Sir Ceredigion yn parhau i gaffael trydan 'gwyrdd' drwy'r contract trydan corfforaethol. Mae lle i edrych ar gaffael nwy 'gwyrdd' yn ogystal â thanwydd hylifol (e.e. LPG neu biodiesel). Nid oes llawer o fudd o ran y ffigurau cyfrifo carbon ond byddai modd ystyried fel arfer da fod y cyfleustodau rydyn ni'n eu defnyddio yn dod o ffynonellau cynaliadwy 'gwyrdd'.

Ynni Adnewyddadwy – Cynhaliodd Gwasanaeth Ynni Llywodraeth Cymru adolygiad o asedau tir ar safleoedd yng Ngheredigion er mwyn edrych ar y potensial ar gyfer cynhyrchu ynni adnewyddadwy. Mae llawer o'r safleoedd y tynnwyd sylw atynt yn destun cyfyngiadau grid sylweddol ond mae ambell i gyfle llai wedi codi o'r broses, gan gynnwys:

- 300kW o PV ychwanegol yn Ysgol Bro Teifi
- 200kW o PV dros y maes parcio yn swyddfeydd Canolfan Rheidol
- 130kW o PV ar safle'r ysgol newydd a fydd yn Nyffryn Aeron

Mae ynni adnewyddadwy bellach yn cael ei gyflwyno'n gyson fel rhan o'r gwaith o adnewyddu adeiladau a hefyd rhaglen Ysgolion yr 21ain Ganrif.

O ystyried cost gynyddol trydan, mae cyfnod ad-dalu'r mathau hyn o gynlluniau yn llawer mwy ffafriol os gallwn ddefnyddio'r trydan a gynhyrchir ar y safle, yn hytrach na'i allforio i'r grid - mae angen sicrhau bod y gosodwaith yn ddigon mawr a bod y lleoliadau'n cael eu dewis ar sail eu gallu i ddefnyddio'r ynni ar y safle.

Adeiladau Sero Net – Yr estyniad newydd yn Ysgol Llwyn yr Eos yw'r adeilad sero net cyntaf sydd ar waith gan y Cyngor. Gosodwyd gwres o'r ddaear a phaneli solar fel rhan o'r cynllun a'r gobaith yw y bydd hyn yn gosod meincnod ar gyfer gwaith adeiladu a wneir gan yr awdurdod yn y dyfodol.

Rhaglen Ysgolion yr 21ain ganrif - Wrth ystyried adeiladu ysgolion newydd fel rhan o'r rhaglen, bydd Cyngor Sir Ceredigion yn anelu at ddatgarboneiddio ac adeiladu adeiladau sero net.

Tyfu Canolbarth Cymru – Mae Strategaeth Ynni Canolbarth Cymru wedi'i chwblhau ac yn dilyn hyn mae Cynllun Gweithredu Ynni Strategol wedi'i ddrafftio ac mae'n cael ei gylchredeg ar draws y rhanbarth ar hyn o bryd ar gyfer sylwadau. Mae Gwasanaeth Ynni Llywodraeth Cymru wedi comisiynu Energy Systems Catapult i lunio Cynlluniau Ynni Ardal Leol ar gyfer Ceredigion a Phowys (un i bob awdurdod) – bydd gwaith yn dechrau yn fuan i ymgysylltu â'r gwahanol randdeiliaid ledled y rhanbarth.

Adrodd ar Allyriadau i Lywodraeth Cymru – Yn anffodus ni chafodd y fethodoleg adrodd ei ryddhau mewn pryd i'w chynnwys yn ein Cynllun Sero Net a dyna pam mae ein Cynllun ond yn cynnwys allyriadau gweithredol. Fodd bynnag, rydym bellach wedi llunio ffigurau'r allyriadau ar gyfer 2019/20, 2020/21 a'r ffigurau diweddar ar gyfer 2021/22. Mae'r rhain yn mynd y tu hwnt i ond yr allyriadau cwmpas 1 a 2 a nodir yn y Cynllun Rheoli Carbon. Maen nhw hefyd yn edrych ar allyriadau o drafnidiaeth a gwastraff, ac ar gaffael nwyddau a gwasanaethau.

Dyma grynodeb o'r allyriadau hyn:-

	kg/CO_2	
Adeiladau, fflyd ac asedau eraill	**7,678,887**	16.79%
Teithio busnes, cymudo a gweithio gartref	**3,678,573**	8.05%
Gwastraff (a gyfrifir gan allyriadau'r gadwyn gyflenwi)	0	0.00%
Cyfanswm yr allyriadau ar y tir	**-432,205**	-0.95%
Cadwyn gyflenwi - Haen 1	**34,798,039**	76.11%
Cyfanswm allyriadau	**45,723,294**	**100.00%**

Mae ffynonellau ychwanegol ar gyfer allyriadau wedi cael eu hychwanegu yn 2021/22 sy'n cynnwys allyriad ar gyfer gweithio gartref. Hefyd rydym wedi cynnwys defnydd ynni o'r ystâd gorfforaethol, eiddo gwag ac STWs yn y cyfrifiadau diweddaraf, sy'n golygu bod cwmpas yr adrodd yn fwy eang.

Fel y gwelir uchod, mae ein hallyriadau o'r gadwyn gyflenwi (sy'n cynnwys gwastraff ar hyn o bryd) yn cyfrif am 76% o'n hôl troed cyffredinol, sef canran sylweddol o'r cyfanswm. Rhaid nodi bod diffyg sylfaenol yn y ffordd y mae'r allyriadau hyn o'r gadwyn gyflenwi yn

cael eu cyfrifo gan eu bod yn seiliedig ar wariant yn unig. Ni roddir ystyriaeth ar hyn o bryd i gaffael yn lleol, nac i gaffael nwyddau/deunyddiau ag allyriadau isel.

Yn ogystal, y gobaith yw y gallwn ni gael gwybodaeth fanylach am rai o ffynonellau'r allyriadau mewn blynyddoedd i ddod, i sicrhau bod yr hyn a adroddir yn adlewyrchu ein sefyllfa bresennol yn fwy cywir. Bydd hyn hefyd o gymorth i wneud penderfyniadau gwybodus ynghylch unrhyw fesurau ar gyfer lleihau allyriadau yn y dyfodol.

Gan fod gennym ddarlun cliriach bellach o gyfanswm ein hôl troed carbon, byddai'n fanteisiol adolygu ein Cynllun i gynnwys y ffynonellau ychwanegol hyn ar gyfer allyriadau. Os ydym am gyflawni ein huchelgais o sero net bydd angen hefyd inni ystyried mesurau i wrthbwyso carbon megis: dal a storio carbon, neu blannu coed. Bydd angen cyflwyno hyn ar y cyd â'r pethau yr ydym eisoes yn eu gwneud: cyflwyno mesurau effeithlonrwydd, ynni adnewyddadwy, rhesymoli, datgarboneiddio'r fflyd, adolygu arferion caffael, gosod seilwaith cerbydau trydan, ac ati.

	A wnaed Asesiad Effaith Integredig? Os naddo, esboniwch pam	
	Crynodeb:	
	Hirdymor:	**Bydd y Cynllun Gweithredu Sero Net hwn yn cefnogi uchelgais y Cyngor o garbon sero net 2030.**
	Integreiddio:	**Bydd yn helpu i integreiddio a sefydlu gostyngiadau mewn allyriadau ar draws yr Awdurdod.**
	Cydweithio:	**Mae'r Cyngor eisoes yn cydweithio â nifer o gyrff cyhoeddus mewn perthynas â lleihau carbon a chyflawni gostyngiad mewn allyriadau.**
LLESIANT CENEDLAETHAU'R DYFODOL:	**Cynnwys:**	**Mae'r Grŵp Newid Hinsawdd a Rheoli Carbon wedi'i hen sefydlu ac yn cael ei fynychu gan Aelodau a swyddogion. Mae hwn yn fforwm cychwynnol da ar gyfer ymgysylltu â rhanddeiliaid, ond mae cyfle i ymwneud yn ehangach ar ôl cyhoeddi'r Cynllun Gweithredu Sero Net hwn.**
	Atal:	**Bydd y Cynllun Gweithredu hwn yn cefnogi camau a mesurau i leihau allyriadau carbon gan gyfrannu at leihau effaith newid hinsawdd.**

ARGYMHELLIAD: **Nodi'r cynnydd a wneir gyda'r camau sydd yn y Cynllun Gweithredu Sero Net.**

Mae'r dudalen yn wag yn fwriadol

Cofnodion Cyfarfod o PWYLLGOR TROSOLWG A CHRAFFU CYMUNEDAU FFYNIANNUS
a gynhaliwyd yn Hybrid - Neuadd Cyngor Ceredigion, Penmorfa, Aberaeron /o bell trwy fideo-gynhadledda ddydd Dydd Mercher, 27 Gorffennaf 2022

PRESENNOL: Cynghorydd Gwyn Wigley Evans (Cadeirydd), Cynghorwyr Cynghorydd Marc Davies (Is-Gadeirydd), Cynghorydd Meirion Davies, Cynghorydd Steve Davies, Cynghorydd Wyn Evans a/ac Cynghorydd John Roberts

HEFYD YN BRESENNOL: Y Cynghorwyr Euros Davies, Elizabeth Evans, Keith Evans a Gareth Lloyd.

SWYDDOGION YN BRESENNOL: Rhodri Llwyd, Swyddog Arweiniol Corfforaethol, Priffyrdd a Gwasanaethau Amgylcheddol; Phil Jones, Rheolwr Corfforaethol, Gwasanaethau Priffyrdd; Chris Wilson, Rheolwr Traffig, Diogelwch a Datblygu; Gerwyn Jones, Rheolwr Corfforaethol, Gwasanaethau Amgylcheddol; Beverley Hodgett, Rheolwr Gwasanaeth; Russell Hughes Pickering, Swyddog Arweiniol Corfforaethol, Economi ac Adfywio; Arwyn Davies, Rheolwr Corfforaethol, Twf a Menter; Lisa Evans, Swyddog Craffu a Safonau; Neris Morgans, Swyddog Gwasanaethau Democrataidd; Nia Jones, Rheolwr Corfforaethol, Gwasanaethau Democrataidd; Carwyn Williams a Rhidian Jones, Cyfieithwyr.

(10.00 am - 1.15 pm)

1 Ymddiheuriadau
Ymddiheurodd y Cynghorydd Carl Worrall am nad oedd yn gallu bod yn bresennol yn y cyfarfod.

2 Datgelu buddiant personol (gan gynnwys datganiadau chwipio) Atgoffir aelodau am eu cyfrifoldeb personol yn datgan unrhyw fudd personol a budd sydd yn rhagfarnu yn gysylltiedig â materion a gynhwysir yn yr agenda hwn yn unol â darpariaethau Deddf Llywodraeth Leol 2000, Cyfansoddiad y Cyngor a Chod Ymddygiad Aelodau. Yn ogystal, mae'n rhaid i Aelodau ddatgan unrhyw chwip plaid gwaharddedig a roddwyd ar Aelod yng nghyswllt y cyfarfod yn ôl Mesur Llywodraeth Leol (Cymru) 2011.
Datganodd y Cynghorydd Chris James fuddiant personol a buddiant sy'n rhagfarnu mewn perthynas ag eitem 3 a gadawodd y cyfarfod pan oedd y mater hwnnw'n cael ei drafod.

3 Strategaeth gwefru cerbydau trydan a cynllun gweithredu Ceredigion
Eglurodd y Cynghorydd Keith Henson, Aelod Cabinet, mai'r argymhelliad gan Grŵp Rheoli Carbon a Newid Hinsawdd Cyngor Sir Ceredigion (20/06/2022) oedd i aelodau'r Pwyllgor Trosolwg a Chraffu Cymunedau Ffyniannus ystyried y Strategaeth a'r Cynllun Gweithredu drafft cyn eu cyflwyno i'r Cabinet i'w mabwysiadu'n ffurfiol. Nodwyd bod y Strategaeth yn y broses o gael ei datblygu.

Cyfeiriodd Phil Jones at y cefndir a'r sefyllfa bresennol fel yr amlinellir yn yr adroddiad.

Rhoddodd Chris Wilson gyflwyniad i'r Pwyllgor gan ganolbwyntio ar y sefyllfa bresennol a'r lleoliadau (Atodiad 1). Nodwyd mai ffocws cymalau cynnar y rhaglen oedd gosod pwyntiau gwefru cerbydau trydan yn y meysydd parcio sydd dan berchnogaeth neu reolaeth y Cyngor Sir ynghyd â safleoedd y Cyngor. Crybwyllwyd hefyd fod peryglon cwympo yn gysylltiedig â'r pwyntiau gwefru cerbydau trydan, ac felly bydd yn bwysig rheoli hyn. O ran y 25% o arian cyfatebol oddi wrth Lywodraeth Cymru, mae angen cael cymeradwyaeth gweinidogol; ar ôl cael y cymeradwyaeth, bydd cam un yn cychwyn. Nodwyd y bydd hi'n anodd sicrhau ffrydiau ariannu ar gyfer camau 3 a 4 ynghyd â denu buddsoddiad preifat, a hynny oherwydd natur wledig y sir. Mae'n bosib bod nifer y pwyntiau gwefru cerbydau trydan ar draws y sir yn is nag ardaloedd mwy trefol oherwydd nifer y boblogaeth a'r galw amdanynt. Y nod oedd darparu dosbarthiad cytbwys o bwyntiau gwefru cerbydau trydan ar draws y sir. Er gwaethaf yr ansicrwydd o ran technoleg, bydd yn allweddol ystyried pob opsiwn gan gynnwys hydrogen.

Rhoddwyd cyfle i'r Aelodau ofyn cwestiynau ac atebwyd y rhain gan Phil Jones a Chris Wilson. Y prif bwyntiau a godwyd oedd y canlynol:

- O ran cyllid, derbyniwyd £420,000 oddi wrth Gronfa Trawsnewid Cerbydau Allyriadau Isel Iawn Llywodraeth Cymru (ULEVTF) yn ystod blwyddyn ariannol 2021/22. Yn ogystal, dyrannwyd hyd at £300,000 o gyllid grant i'r Cyngor gan Gymdeithas Llywodraeth Leol Cymru. Dyfarnwyd swm o £273,171 gan Lywodraeth y Deyrnas Unedig ar gyfer cyflawni'r ail gam yn ystod blwyddyn ariannol 2022/23 (£204,878.20 (75%) o Gynllun Pwyntiau Gwefru Preswyl ar y Stryd (ORCS) Swyddfa Cerbydau Allyriadau Sero Llywodraeth y DU (OZEC), a darperir y £68,293 (25%) sy'n weddill fel arian cyfatebol gan Lywodraeth Cymru).
- Yn sgil ansicrwydd ynghylch a fyddai'r arian cyfatebol (25%) yn cael ei roi, roedd Llywodraeth Cymru'n ymwybodol nad oedd unrhyw fuddsoddwyr preifat yn y sir. Gobeithir y daw cadarnhad ysgrifenedig oddi wrth Lywodraeth Cymru ynghylch yr arian maes o law. Roedd ystyried ffynonellau eraill o gyllid dal yn allweddol.
- Roedd Silversone Green Energy wedi cynorthwyo'r Cyngor yn dilyn proses tendro i osod a gweithredu'r pwyntiau gwefru cerbydau trydan ar gyfer y cyhoedd ym Mhenmorfa a Chanolfan Rheidol. Mae cytundeb ar waith i sicrhau bod y cwmni a'r Cyngor yn cael siâr o'r elw, a effeithiwyd gan y niferoedd isel a oedd yn eu defnyddio.
- Mae'r Strategaeth yn allweddol o ran nod y Cyngor i fod yn garbon net sero erbyn 2030 ac o ran cyflawni Cynllun Gweithredu Net Sero'r Cyngor. Byddai hefyd yn darparu mynediad i bobl sydd eisiau gwefru eu cerbydau.
- Ni roddwyd ystyriaeth i osod pwyntiau gwefru cerbydau trydan mewn ysgolion gan gynnwys yr ysgol ardal newydd yn Nyffryn Aeron; cadarnhaodd y swyddogion fod amod ar hyn o bryd y dylid darparu'r pwyntiau gwefru i'r cyhoedd.
- Yn amodol ar gynllunio, roedd yr Aelodau'n teimlo y dylai'r Cyngor ystyried cyfleoedd i greu ynni adnewyddadwy yn y sir.

- Codwyd pryderon na fyddai gosod y pwyntiau gwefru cerbydau trydan yn lleihau nifer y cerbydau ar y ffyrdd yn unol â'r strategaeth drafnidiaeth 'Llwybr Newydd'.
- Codwyd pryderon ynghylch gallu'r Grid Cenedlaethol i ddarparu trydan oherwydd byddai hyn yn cyfyngu ar le y gellir gosod y pwyntiau gwefru cerbydau trydan. Hefyd, codwyd pryderon ynghylch diogelwch y cyflenwad o ynni, yn enwedig yn yr hinsawdd bresennol, ac o le y daw'r ynni a ddarperir gan y gweithredwr rhwydwaith dosbarthu trydan (DNO).
- Allweddol fydd cydweithio er mwyn osgoi gosod nifer o bwyntiau gwefru trydan yn yr un lleoliad.
- Cododd gwestiwn ynghylch yr ystyriaeth a roddir i ffynonellau eraill o danwydd (e.e. HGO); cadarnhaodd y swyddogion eu bod yn ystyried opsiynau'n barhaus.
- Roedd prinder addysg ynghylch buddion cerbydau trydan i'r amgylchedd.
- Gan fod gwerthwyr ceir yn cofrestru cerbydau trydan yn ganolog ac nid o dan gyfeiriad y perchennog, nid oes cofnod cywir ar gael o ran nifer y cerbydau trydan sydd yn y sir.
- Y gwahanol fathau o bwyntiau gwefru cerbydau trydan ac argaeledd mathau penodol ohonynt; esboniodd swyddog fod gwefrydd cyffredinol ar gael ynghyd ag addaswr ar gyfer gwahanol gerbydau. Datblygwyd apiau i gynorthwyo gyrwyr i chwilio am bwyntiau gwefru. Bydd angen ystyried sut i rannu gwybodaeth â'r cyhoedd am y pwyntiau gwefru yn y dyfodol a bydd angen cynnwys gwybodaeth ar yr apiau,
- Wrth ymateb i ymholiad ynghylch y diffiniad o wefru preswyl ar y stryd, eglurodd y swyddogion fod hyn yn golygu darparu pwyntiau gwefru oddi ar y stryd ar gyfer cerbydau sydd ar y stryd.
- O safbwynt diogelwch, bydd yn bwysig rhoi digon o rybudd i'r cyhoedd am unrhyw waith sydd ar y gweill ar gyfer gosod y pwyntiau gwefru.
- Yn sgil pryderon ynghylch lleoliad y pwyntiau gwefru cerbydau trydan yn Aberaeron, cytunodd y swyddogion i drafod y mater gyda'r aelod etholedig.
- Nodwyd bod problemau wedi codi o ran y pwyntiau gwefru cerbydau trydan ym Mhenmorfa yn ymddangos ar yr ap ac esboniodd y swyddogion y byddant yn codi hyn gyda Silverstone Green Energy.
- Codwyd pryderon ynghylch y gwaith cloddio dwys sydd ynghlwm wrth fatris lithiwm.
- O ran gwefru ar y stryd, esboniodd y swyddogion fod rheoliadau ar waith ynghylch beth y gellir / beth na ellir ei wneud felly canolbwyntir ar sicrhau fod gan bobl y cyfleusterau i wneud hynny'n ddiogel. Bydd angen sefydlu system wefru maes o law.

Yn dilyn trafodaeth hir, cytunodd yr aelodau gyda'r argymhelliad canlynol:

- Gofynnir i'r Pwyllgor Trosolwg a Chraffu Cymunedau Ffyniannus ystyried y Strategaeth a'r Cynllun Gweithredu drafft (Atodiad 1) a'u cymeradwyo er mwyn eu cyflwyno i'r Cabinet i'w mabwysiadu'n ffurfiol gan y Cyngor.

4 Adolygu'r Gwasanaethau Rheoli Gwastraff - cymorth gan ymgynghorwyr

Nododd y Cynghorydd Keith Henson, Aelod Cabinet, mai pwrpas yr adroddiad oedd gofyn i Aelodau'r Pwyllgor gefnogi'r ffordd ymlaen sy'n cael ei chynnig ar gyfer adolygu gwasanaeth gwastraff Cyngor Sir Ceredigion.

Rhoddodd Gerwyn Jones drosolwg o'r Gwasanaethau Rheoli Gwastraff ac amlygodd y ffaith fod gan y gwasanaeth broffil uchel ymhlith y cyhoedd. Darparwyd cefndir y strategaeth flaenorol a'r angen am un newydd er mwyn pennu cyfeiriad y gwasanaeth yn y dyfodol. Cyfeiriwyd at y safleoedd gwastraff cartref, y gorsafoedd trosglwyddo gwastraff, y cyfleusterau sy'n cael eu rhoi ar gontract a'r model casglu gwastraff wrth ymyl y ffordd, fel yr amlinellir yn yr adroddiad. Rhoddwyd esboniad bras o'r gwasanaeth cymysg presennol a weithredwyd yn 2019 ynghyd â'r dull a ffefrir gan Lywodraeth Cymru, sef didoli gwastraff wrth ymyl y ffordd, fel y cyhoeddwyd yng Nglasbrint Casgliadau Llywodraeth Cymru yn 2012. Yn y dyfodol bydd pwysau sylweddol i arbed arian – ar hyn o bryd mae 9 lori fawr (sydd gwerth tua £186,000) a 7 lori lai (sydd gwerth tua £136,000) yn y fflyd a bydd angen eu hadnewyddu mewn 3-4 blynedd. Yn sgil yr amser sy'n rhaid aros i'r cerbydau gyrraedd ar ôl eu harchebu, ynghyd â'r broses hirfaith ar gyfer arfarnu opsiynau, mae'n bwysig ystyried y ffordd strategol ymlaen ar gyfer Ceredigion. Mae angen ystyried cyfleoedd megis y cynnig diweddar i brynu dwy lori 26 tunnell am £155,000 yr un yn hytrach na £272,000 gyda chymorth grantiau'r llywodraeth. Rhoddodd y swyddog drosolwg o gwmpas arfaethedig y gwaith y bydd yr ymgynghorwyr yn ymgymryd ag ef.

Gofynnodd yr Aelodau nifer o gwestiynau ynghylch eu meysydd o ddiddordeb ac atebwyd y rhain yn eu tro gan Gerwyn Jones. Y prif bwyntiau a godwyd oedd y canlynol:

- Dilynir y prosesau arferol ar gyfer penodi'r ymgynghorwyr annibynnol a fydd yn cyflawni'r gwaith.
- Bydd angen fflyd newydd o gerbydau erbyn 2027-28 - oherwydd y dechnoleg gymhleth sydd ynghlwm wrth hyn a'r angen i ystyried opsiynau gwahanol, mae'n rhaid dechrau'r gwaith yn fuan.
- Amlygwyd y pwysau o ran staffio – er bod y tîm bron yn llawn, mae'r gwasanaeth yn rhedeg ar 70% o lefelau staffio oherwydd gwyliau blynyddol, hyfforddiant a salwch. Yn ogystal, nid yw'r Cyngor yn ddiogel rhag y diffyg gyrwyr a thechnegwyr cerbydau nwyddau trwm (HGV) – mae rhaglenni hyfforddi ar gael i ddenu staff. Gan fod y gwasanaeth gwastraff yn flaenoriaeth i'r adran, rhennir aelodau staff sydd mewn rolau eraill ac sy'n meddu ar drwydded yrru cerbydau nwyddau trwm a defnyddir staff asiantaeth yn achlysurol.
- Codwyd pryderon bod yr un llwybrau'n cael eu heffeithio gan wyliau'r banc gan fod y mwyafrif ohonynt ar ddydd Llun. Gan nad oedd cytundebau'r staff yn cynnwys gweithio ar wyliau'r banc, awgrymwyd y dylid adolygu cytundebau'r staff ynghyd ag ystyried cynllun wrth gefn fel yr hyn a weithredir gan y gwasanaeth tân. Roedd y swyddog yn croesawu awgrymiadau pellach.
- Nododd yr Aelodau eu bod yn derbyn mwy a mwy o alwadau oddi wrth y cyhoedd ynghylch casgliadau gwastraff. Awgrymodd y swyddog y dylid cyfeirio'r cyhoedd at Clic neu wefan y Cyngor, lle ymdrechir i rannu

gwybodaeth ynghylch newidiadau i wasanaethau, gan gynnwys dangosyddion perfformiad.

- Wrth ymateb i gwestiwn gan Aelod ynghylch lorïau trydan, esboniodd y swyddog fod y staff wedi treialu lori a bod hyn wedi bod yn llwyddiannus. Fodd bynnag, ar hyn o bryd roedd y lorïau gwerth tua £450,000 yr un. Dylid rhoi ystyriaeth i hyn os bydd y lorïau'n dod yn fwy fforddiadwy.
- Codwyd pryderon ynghylch i le anfonir y gwastraff ar ôl ei gasglu; roedd y swyddog yn teimlo y dylai nifer o faterion gael eu hystyried yn rhyngwladol ond roedd gan y sir rôl i'w chwarae o ran dylanwadu ar newid. Nid oes digon o wastraff yng Ngheredigion i gyfiawnhau buddsoddi mewn technoleg i ddelio ag ef.
- Wrth i fwy o Awdurdodau Lleol fabwysiadu Glasbrint Llywodraeth Cymru, mae perygl y bydd llai o grantiau ar gael i'r Awdurdodau Lleol sy'n penderfynu peidio ei fabwysiadu.
- O ran a fyddai swyddogion yn gallu gwneud y gwaith arfaethedig a bennwyd ar gyfer ymgynghorwyr a chysylltu ag Awdurdodau Lleol sydd eisoes wedi mabwysiadu'r dull o ddidoli wrth ymyl y ffordd, dywedodd y swyddog nad oedd capasiti o fewn y tîm o gofio'r llwyth gwaith a'r cyfrifoldebau rheoli sydd gan y staff.
- Eglurodd y swyddog fod rhai peiriannau'n cael eu prydlesu. Roedd yn bwysig bod yn ddeinamig ac ystyried y cyfleoedd gorau sydd ar gael ar y pryd gyda chymorth yr adran Cyllid a Chaffael.
- Caiff y cerbydau eu harchwilio bob 6 wythnos yn fewnol, ac os oes angen caiff unrhyw waith pellach ei wneud yn lleol. Yr unig gerbydau a anfonir yn ôl at y gwerthwyr yw'r rhai sydd dan warant neu'r rhai sydd angen sylw arbenigol. Po hiraf y mae'r lorïau oddi ar y ffyrdd, y mwyaf yr effaith ar wasanaethau.
- Amlygwyd y ffaith y byddai newid i wasanaethau yn achosi problemau ac felly roedd ymgynghori â'r Aelodau sy'n cynrychioli trigolion Ceredigion yn allweddol drwy gydol y broses cyn y gwneir unrhyw benderfyniadau. Derbyniwyd 1500 ymateb yn dilyn yr ymgynghoriad cyhoeddus diwethaf.
- Byddai effeithiolrwydd didoli wrth ymyl y ffordd yn amrywio mewn gwahanol ardaloedd (e.e. ardaloedd trefol o gymharu ag ardaloedd gwledig) a math o eiddo (tŷ amlfeddiannaeth o gymharu â thŷ sengl) yn y sir.

Diolchodd yr Aelodau i'r staff a oedd wedi gweithio trwy gydol y pandemig COVID-19 a diolchwyd iddynt am eu hymdrechion parhaus.

Yn dilyn trafodaeth hir, cytunodd yr aelodau i'r canlynol:

- Nodi'r sefyllfa bresennol, y risgiau a amlinellwyd a'r angen i adolygu'r gwasanaeth.
- Nodi y bydd gwasanaeth ymgynghori annibynnol yn cael ei benodi i adolygu'r gwasanaeth, gan nodi y bydd yn gweithio'n agos gyda'r gwasanaeth gwastraff.
- Nodi y bydd y gwaith o adolygu'r gwasanaeth wedi'i gyfyngu, yn fras, i'r hyn a nodir yn yr adroddiad hwn.
- Cytuno y bydd y Pwyllgor yn cymryd rhan weithredol yn y prosiect a rhan flaenllaw o ran y broses ymgysylltu gwleidyddol a chymeradwyo.

5 Trosolwg: Priffyrdd a Gwasanaethau Amgylcheddol

Rhoddodd Rhodri Llwyd gyflwyniad i'r Pwyllgor ar y gwasanaethau a'r swyddogaethau a ddarperir, gan amlinellu'r canlynol:

- Gwasanaethau Craidd
- Swyddogaethau Allweddol
- Blaenoriaethau'r Gwasanaeth
- Gweithlu Rheng Flaen
- Dangosyddion Perfformiad
- Ceisiadau am Wasanaeth
- Cyllidebau- Hanesyddol
- Gostyngiadau Staff a'r Gyllideb
- Heriau a Blaenoriaethau

Cadarnhaodd y swyddog fod tîm gyda 4 aelod o staff a rheolwr yn cynnal archwiliadau rheolaidd ar y 2260km o ffyrdd cyhoeddus y mae'r Cyngor yn gyfrifol amdanynt, gan ddilyn y Cod Ymarfer ar gyfer Archwilio Priffyrdd. Yn sgil diffyg cyllid, ar y pryd roedd £34 miliwn o waith cynnal a chadw priffyrdd yn aros i'w wneud ac mae'n cynyddu wrth i gyflwr y ffyrdd ddirywio.

Yn dilyn cwestiwn gan Aelod, nododd y swyddog y gellir cyflwyno'r ddeddfwriaeth ynghylch parcio ar balmentydd, a gynigiwyd yn flaenorol gan Lywodraeth Cymru, ar ôl cyflwyno'r terfynau cyflymder o 20mya.

Nododd y Cadeirydd y bu cyfathrebu rhwng y swyddogion a'r Aelodau ynghylch nodi'r ffyrdd posib lle gellir gostwng y cyfyngiadau cyflymder i 20mya ymhob ward o dan gynnig Llywodraeth Cymru. Byddai cyfle i ailedrych ar hyn y flwyddyn nesaf.

Cydnabu'r Cynghorydd Elizabeth Evans y bu'r gwasanaeth o dan bwysau ariannol sylweddol am nifer o flynyddoedd. Ychwanegodd fod yr ymgynghori rhwng y swyddogion a'r Aelodau ynghylch cyflwyno terfynau cyflymder o 20mya wedi bod yn fuddiol ac yn cael ei werthfawrogi.

Eglurodd y swyddog efallai bod y grantiau a ddyfarnwyd yn hwyr gan Lywodraeth Cymru ar ddiwedd y flwyddyn ariannol wedi arwain at y £250,000 o danwariant a adroddwyd ar gyfer gwaredu gwastraff.

Yn dilyn cwestiynau, cytunodd yr aelodau i nodi'r gwasanaethau a'r swyddogaethau a ddarperir gan Briffyrdd a Gwasanaethau Amgylcheddol.

6 Cynnydd o ran cyflawni'r Strategaeth Economaidd

Cytunodd yr aelodau i ohirio'r eitem i gyfarfod yn y dyfodol.

7 Cadarnhau Cofnodion y Cyfarfod blaenorol ac ystyried unrhyw faterion sy'n codi o'r Cofnodion

Cytunwyd bod cofnodion cyfarfod y Pwyllgor a gynhaliwyd ar 11 Mawrth 2022 yn gywir.

Materion yn codi: Wrth ymateb i ymholiad y Cadeirydd ynghylch a oedd Cyfoeth Naturiol Cymru wedi ymateb i'r llythyr yn dilyn cyfarfod y Pwyllgor a

gynhaliwyd ar 11 Mawrth 2022, cadarnhaodd Lisa Evans na dderbyniwyd unrhyw ymateb er ei bod wedi mynd ar eu hol sawl gwaith.

Yn dilyn trafodaeth, cytunwyd y byddai'r Cadeirydd presennol yn anfon llythyr arall at Gyfoeth Naturiol Cymru i nodi siom yr Aelodau a'r angen am ymateb ar frys.

8 Ystyried Rhaglen Flaen Trosolwg a Chraffu

Cytunwyd nodi cynnwys y Flaenraglen Waith a gyflwynwyd, yn ddibynnol ar gynnwys y canlynol:

- Diweddariad am Glefyd Coed Ynn – Hydref 2022
- Y Strategaeth Economaidd (a ohiriwyd yn y cyfarfod heddiw)
- Gweithdy ynghylch y Gyllideb cyn Paratoi'r Gyllideb ar gyfer 23-24 - Hydref 2022.

Cadarnhawyd yng Nghyfarfod y Pwyllgor Trosolwg a Chraffu Cymunedau Ffyniannus a gynhaliwyd ar Dydd Mercher, 19 Hydref 2022

Cadeirydd:_____

Dyddiad:_____

Mae'r dudalen yn wag yn fwriadol

Cyngor Sir CEREDIGION County Council

ADRODDIAD I'R:	**Pwyllgor Trosolwg a Chraffu Cymunedau Sy'n Dysgu**
DYDDIAD:	**19 Hydref 2022**
LLEOLIAD:	**Hybrid**
TEITL:	**Blaenraglen Waith Ddrafft 2022/23**
PWRPAS YR ADRODDIAD:	**Adolygu rhaglen waith bresennol y Pwyllgor**
Y RHESWM PAM FOD CRAFFU WEDI GOFYN AM Y WYBODAETH HON:	**Mae blaenraglen waith y Pwyllgor yn cael ei harolygu a'i diweddaru ymhob cyfarfod**

CEFNDIR:

Mae'r Pwyllgorau Trosolwg a Chraffu'n goruchwylio gwaith y Cyngor er mwyn sicrhau y darperir gwasanaethau yn y ffordd orau posib a hynny er budd y gymuned leol.

Swyddogaeth Trosolwg a Chraffu yw ystyried y gwasanaethau a'r materion sy'n effeithio ar bobl yng Ngheredigion. Mae'r broses yn rhoi cyfle i Gynghorwyr archwilio amryw swyddogaethau'r Cyngor, holi cwestiynau am sut y gwnaethpwyd penderfyniadau, ystyried os ellir gwneud gwelliannau i wasanaethau a gwneud argymhellion yn unol â hynny.

Mae craffu'n hanfodol wrth hyrwyddo atebolrwydd, effeithlonrwydd ac effeithiolrwydd wrth i'r Cyngor fynd ati i wneud penderfyniadau a'r ffordd mae'n darparu gwasanaethau.

Prif swyddogaethau'r Pwyllgorau Trosolwg a Chraffu yw'r canlynol:

- Galw'r Cabinet a'r Swyddogion i gyfrif ynghylch eu penderfyniadau
- Bod yn 'gyfaill beirniadol', drwy holi cwestiynau am sut y gwnaethpwyd penderfyniadau, fel bod y bobl sy'n penderfynu'n destun 'rhwystrau a gwrthbwysau', gan wneud y drefn o benderfynu yn fwy dilys
- Cynnal adolygiadau o wasanaethau a pholisïau'r Cyngor
- Cynnal adolygiadau ar gyfer datblygu gwasanaethau a pholisïau'r Cyngor
- Ystyried unrhyw fater arall sy'n effeithio ar y sir
- Sicrhau bod Ceredigion yn perfformio hyd eithaf ei allu ac yn darparu gwasanaethau o'r radd flaenaf i'w ddinasyddion
- Asesu effaith polisïau'r Cyngor ar gymunedau lleol, ac argymell ffyrdd o wella
- Gweithio gyda'r cyhoedd i ddatblygu polisïau a gwasanaethau sy'n canolbwyntio ar y dinasyddion.

Gall trefn effeithiol o Drosolwg a Chraffu arwain at y canlynol:

- Penderfyniadau gwell
- Gwelliant o ran Darparu Gwasanaethau a Pherfformiad
- Trefn gadarn ar gyfer Datblygu Polisïau, yn seiliedig ar ymgynghori â'r cyhoedd a chyfraniad arbenigwyr annibynnol
- Gwelliant o ran Democratiaeth, Cynhwysiant, Arweinyddiaeth Gymunedol ac Ymgysylltu
- Ychwanegu haen eglur o dryloywder ac atebolrwydd i brosesau gwleidyddol y Cyngor
- Rhoi cyfle i bob Aelod feithrin sgiliau a gwybodaeth arbenigol a allai fod o fudd yn y dyfodol wrth lunio polisïau a monitro perfformiad
- Creu diwylliant o hunan-herio ar sail tystiolaeth.

Y SEFYLLFA BRESENNOL:

Cwestiynau i'w hystyried wrth ddewis pynciau

- A oes amcan clir dros archwilio'r pwnc hwn?
- Ydych chi'n debygol o lwyddo i gael y canlyniad a ddymunir?
- Beth yw'r manteision tebygol i'r Cyngor a dinasyddion Ceredigion?
- Ydy'r mater yn un sylweddol?
- Oes yna gysylltiadau â'r Strategaeth Gorfforaethol?
- A yw'n fater allweddol i'r cyhoedd?
- Ydy'r materion wedi cael eu codi gan archwiliad allanol?
- A yw'n wasanaeth sy'n perfformio'n wael?

Dewis pynciau

Dylai Pwyllgorau Trosolwg a Chraffu ystyried gwybodaeth o'r Strategaeth Gorfforaethol, Cynllun Gwella, Cynllun Strategol, Cynlluniau Gwasanaeth, y Gofrestr Risg Gorfforaethol, arbedion yn y gyllideb – cynigion ac effaith, cyfarfodydd chwarterol y panel Rheoli Perfformiad Corfforaethol a mewnbwn adrannol wrth ddewis pynciau a chynllunio eu Blaenraglenni Gwaith, ynghyd ag unrhyw waith sy'n parhau.

ARGYMHELLIAD (ARGYMHELLION):

Adolygu a diweddaru'r Blaenraglen Waith bresennol.

Enw Cyswllt:	Lisa Evans
Dynodiad:	Swyddog Craffu a Safonau
Dyddiad yr Adroddiad:	13/10/2022
Acronymau:	BW- Blaenraglen Waith FWP- Forward Work Programme

Blaenraglen Waith y Pwyllgorau Trosolwg a Chraffu 2022/23

Pwyllgor	Eitem (disgrifiad/teitl)	Siaradwyr Gwadd	Pwrpas e.e. monitro, polisi, argymhellion
Cymunedau Ffyniannus			
27 Gorffennaf 2022	Strategaeth Cerbydau Allyriadau Isel Iawn Rheoli gwastraff Strategaeth Economaidd Trosolwg o'r adran Priffyrdd a'r Gwasanaethau Amgylcheddol		
19 Hydref 2022	Strategaeth economaidd Diweddariad ar Clefyd coed ynn Reoli Carbon		
7 Rhagfyr 2022			
17 Chwefror 2023 9.30am	Paratoi'r cyllideb		

5 Ebril 2023			
Cyfarfodydd y dyfodol	Awgrymiadau: Effaith cynlluniau a ariennir gan grant – beth yw'r effaith, pa mor dda mae arian yn cael ei dynnu i lawr Defnydd o le – sut allwn ni ei wneud yn fwy bywiog, cynyddu incwm Newid Hinsawdd ac Erydu Arfordirol / Llifogydd (o'r gofrestr risgiau) Cynllunio – llwythi achosion, perfformiad, Ffosffadau – o'r gofrestr risgiau CDLl Adolygu strategaeth toiledau cyhoeddus		