CHAPTER 11

BIM IN ACC: SETTING UP THE CDE

If it isn't Published, it isn't for construction.

> **FIELD NOTE · CDE DISCIPLINE**
> *On every project where information went wrong, the problem was rarely the software. It was the route. A CDE only works when everyone agrees what "shared" and "published" mean, and who is allowed to move a file from one to the other. I explain that rule in the first week, in plain English, and I repeat it until nobody needs to ask.*

> **Where are we?**
> Friday, 9:30, site office, with Alex on video from London. The scan has confirmed the drainage deviation, but while rerunning the clash tests Chris found the root of last week's chaos: three versions of the structural model in three different folders. And on Tuesday, Sam's team marked out sleeves from a drawing that had been superseded two weeks earlier.

From site experience

Most "BIM problems" I see on site aren't modelling problems. They're **information management** problems: nobody is sure which file is the right one. A CDE (common data environment) is not just a folder on a server. It's an agreement: where information lives, who checks it, who can see it and who says it's ready for construction.

On this project the CDE is ACC (now Autodesk Forma; on site everybody still says ACC). It gives you folders, permissions, version history, review workflows and transmittals. It doesn't give you discipline. **The tool doesn't enforce ISO 19650 — the protocol does.** And the most important line in that protocol is short: **if it isn't Published, it isn't for construction.**

CDE states · what they mean and who moves the information

State	What it means	How it moves on	Who can see it
WIP	Work in progress. Unchecked; can change daily.	Compliance check (BIM) + content approval (team lead) → Shared	Only the originating team
Shared	Checked. Suitable for coordination or comment. Not for construction.	Design review (Maya) + authorisation (Ana) → Published	All project teams and the client
Published	Authorised for use: construction, procurement.	Replaced by a new published revision → Archived	Everyone, read-only
Archived	Superseded or historical. Kept as the audit trail.	Stays there	Everyone, read-only; not for use

Naming convention · one file name, field by field

Field	Example	Meaning
Project	MBV	Marbella villa
Originator	STC	Structural consultant (the company that produced the file)
Volume / system	ZZ	All volumes
Level / location	ZZ	Multiple levels
Type	M3	3D model (DR = drawing, SP = specification, RP = report)
Role	S	Structural (A = architect, M = mechanical, E = electrical)
Number	0001	Sequential number
Not in the name	P03 · S1	Revision and status go in the attributes (metadata), not in the file name

Words you need

English	Español	English	Español
common data environment (CDE)	entorno común de datos	work in progress (WIP)	trabajo en curso
to publish (for construction)	publicar (para construcción)	superseded	anulado / sustituido por otra revisión
naming convention	convención de nomenclatura	permissions / access rights	permisos / derechos de acceso
review and approval workflow	flujo de revisión y aprobación	transmittal	remisión / hoja de remisión de documentos
version history	historial de versiones	status / suitability code	código de estado / idoneidad

Real conversation · "Which file is the right one?"

CDE set-up meeting

ROLE	CONVERSATION
Ana · Project Manager	Right, let's start. Chris, you've been rerunning last week's clash tests. What did you find? *Bueno, empezamos. Chris, has estado repitiendo los tests de interferencias de la semana pasada. ¿Qué has encontrado?*
Chris · BIM Coordinator	The root of the chaos, I think. We've got three versions of the structural model in three different folders, and the one I federated last week wasn't the current one. *El origen del caos, creo. Tenemos tres versiones del modelo de estructura en tres carpetas distintas, y la que federé la semana pasada no era la vigente.*
Maya · Design Manager	Hang on. So some of those model errors weren't real? *Espera. ¿Entonces algunos de esos errores del modelo no eran reales?*
Chris · BIM Coordinator	Some of them, yes. I'm rerunning those tests against the right model now. But it isn't only the model. *Algunos, sí. Ahora estoy repitiendo esos tests con el modelo correcto. Pero no es solo el modelo.*
Luis · Site Manager	No. On Tuesday Sam's team marked out the first-floor sleeves from a drawing that had been superseded two weeks ago. We caught it before anyone started coring. *No. El martes el equipo de Sam replanteó los pasatubos de la planta primera con un plano que estaba anulado desde hacía dos semanas. Lo pillamos antes de que nadie empezara a perforar.*
Sam · Subcontractor	We used the drawing in the shared folder. How were my guys supposed to know it was out of date? *Usamos el plano de la carpeta compartida. ¿Cómo iban a saber mis chicos que estaba desactualizado?*
Chris · BIM Coordinator	Honestly, they couldn't. Rev B and rev C were sitting side by side in Shared as two separate files. *Sinceramente, no podían. La rev B y la rev C estaban una al lado de la otra en Shared como dos archivos distintos.*
Maya · Design Manager	Rev C was urgent, so I uploaded it straight to Shared. I assumed everyone would see it was the newer one. *La rev C era urgente, así que la subí directamente a Shared. Di por hecho que todos verían que era la más nueva.*
Ana · Project Manager	Okay. I'm not interested in whose file it was; I'm interested in making sure it can't happen again. From today, everything goes through ACC. No drawings by email, no download links, no USB sticks. *Vale. No me interesa de quién era el archivo; me interesa asegurarnos de que no vuelva a pasar. Desde hoy, todo pasa por ACC. Nada de planos por correo, ni enlaces de descarga, ni pendrives.*

ROLE	CONVERSATION
Chris · BIM Coordinator	Then I'd propose four areas, following ISO 19650: WIP, Shared, Published and Archived. Each team gets its own WIP folder that only they can see, including the structural consultant. Shared is for checked information other teams can coordinate with. Published is for construction. Archived keeps what's been superseded, read-only. *Entonces propondría cuatro áreas, siguiendo la ISO 19650: WIP, Shared, Published y Archived. Cada equipo tiene su propia carpeta WIP que solo ve él, incluida la consultora de estructuras. Shared es para información revisada con la que otros equipos pueden coordinarse. Published es para construir. Archived guarda lo anulado, en solo lectura.*
Sam · Subcontractor	So what do my supervisors actually build from? *¿Y entonces mis encargados con qué construyen exactamente?*
Chris · BIM Coordinator	Only Published. If it isn't in Published, it isn't for construction. *Solo con Published. Si no está en Published, no es para construir.*
Alex · Client	Sorry, can I jump in? Why can't I see the WIP folders? I'm paying for all this work, after all. *Perdonad, ¿puedo meterme? ¿Por qué no puedo ver las carpetas WIP? Al fin y al cabo, soy yo quien paga todo este trabajo.*
Ana · Project Manager	Fair question, Alex. WIP is unchecked work; it can change three times before lunch. If you make a decision on it, you might be deciding on something that no longer exists. You'll see everything in Shared and Published, and anything that needs your decision will come to you for review. *Buena pregunta, Alex. WIP es trabajo sin revisar; puede cambiar tres veces antes de comer. Si decides algo sobre eso, puede que estés decidiendo sobre algo que ya no existe. Verás todo lo que haya en Shared y Published, y lo que necesite tu decisión te llegará para revisión.*
Alex · Client	Fine. As long as I'm not the last to know when something changes. *Bien. Siempre que no sea el último en enterarme cuando algo cambie.*
Maya · Design Manager	I'm still not convinced. When something's urgent, why can't I just upload it to the shared folder? It's one click. *Sigo sin verlo claro. Cuando algo es urgente, ¿por qué no puedo subirlo sin más a la carpeta compartida? Es un clic.*
Chris · BIM Coordinator	Because Shared doesn't mean uploaded. It means checked. The moment it's in Shared, other teams start working from it, and that's exactly how we ended up with the sleeves. *Porque Shared no significa subido. Significa revisado. En cuanto está en Shared, otros equipos empiezan a trabajar con ello, y así es justo como acabamos con lo de los pasatubos.*
Ana · Project Manager	And for urgent items, we don't skip the check, we speed it up. Chris, how would that work in ACC? *Y con lo urgente no nos saltamos la revisión, la aceleramos. Chris, ¿cómo funcionaría eso en ACC?*

ROLE	CONVERSATION
Chris · BIM Coordinator	Two review workflows. WIP to Shared: I check the naming and the attributes, and the team lead approves the content. Shared to Published: Maya confirms it's coordinated and Ana authorises it. If it's urgent, you call me and it's done the same day. *Dos flujos de revisión. De WIP a Shared: yo compruebo la nomenclatura y los atributos, y el responsable del equipo aprueba el contenido. De Shared a Published: Maya confirma que está coordinado y Ana lo autoriza. Si es urgente, me llamas y queda hecho en el día.*
Maya · Design Manager	Fair enough. What about file names? Mine have the revision in them. *Me parece bien. ¿Y los nombres de archivo? Los míos llevan la revisión en el nombre.*
Chris · BIM Coordinator	That's the other rule: revision and status go in the attributes, not in the name. If you call it 'rev C final', ACC treats it as a new file, not a new version of the same one. Same name, new version, and the history stays with it. *Esa es la otra regla: la revisión y el estado van en los atributos, no en el nombre. Si lo llamas «rev C final», ACC lo trata como un archivo nuevo, no como una nueva versión del mismo. Mismo nombre, nueva versión, y el historial se queda con él.*
Ana · Project Manager	Let's close. Chris, folders, permissions, naming standard and workflows by Friday, plus a one-page CDE protocol. Maya, rev C through the workflow today. Luis and Sam, every superseded print off site by Monday. And every publication goes out with a transmittal, so we know who received what. *Vamos cerrando. Chris, carpetas, permisos, estándar de nomenclatura y flujos para el viernes, más un protocolo del CDE de una página. Maya, la rev C por el flujo hoy mismo. Luis y Sam, todas las copias anuladas fuera de la obra para el lunes. Y cada publicación sale con su transmittal, para saber quién ha recibido qué.*

Grey support · difficult expressions

The root of the chaos, I think.
El origen del caos, creo. (root = raíz: la causa de fondo, no el síntoma)

We caught it before anyone started coring.
Lo detectamos antes de que nadie empezara a perforar. (to catch = detectar a tiempo; coring = perforación con corona)

Rev B and rev C were sitting side by side.
Las revisiones B y C estaban una al lado de la otra. (to sit = estar colocado; no significa "sentarse")

It can change three times before lunch.
Puede cambiar tres veces antes de comer. (exageración coloquial: cambia continuamente)

As long as I'm not the last to know.
Siempre que no sea el último en enterarme. (as long as = siempre que / con tal de que)

We don't skip the check, we speed it up.
No nos saltamos la revisión, la aceleramos. (to skip = saltarse; to speed up = acelerar)

What was really happening?

- Chris didn't report symptoms (wrong clashes, wrong sleeves). He reported the **root cause**: no single source of truth.
- Ana stopped the blame question and moved to **prevention**: "making sure it can't happen again".
- Alex's question about WIP was reasonable. Ana answered with the **risk** (deciding on unchecked work), not with "that's the rule".

- Maya's "one click" was about **speed**. The team kept the check and made it faster, instead of creating an exception.
- The naming rule solved a hidden technical problem: with the revision in the name, ACC creates a **new file** instead of a **new version**.

● Simple · ●● Professional · ●●● Advanced

● SIMPLE	Only use the drawings in Published.
●● PROFESSIONAL	Only information in Published is for construction. If it isn't there, please check with Luis before you start.
●●● ADVANCED	Only information that has been authorised and published in the CDE may be used for construction; anything in WIP or Shared is for coordination only and shouldn't reach site.

PROFESSIONAL RISK

Avoid	Better	Why
Just use the latest file in the folder.	Use the current revision in Published only.	"Latest" is a guess based on dates or names. Published is a controlled status.
I'll put it in Shared now and we'll check it later.	I'll start the review workflow now and call Chris; it'll be in Shared once it's checked.	Once unchecked information is shared, other teams start working from it. The error spreads.

Pressure question

"Why can't I just upload it to the shared folder?"

Because Shared doesn't mean uploaded; it means checked. Other teams coordinate and work from what's in Shared, so an unchecked file there spreads the problem. If it's urgent, we don't skip the check, we speed it up: start the workflow, call Chris, and it can be in Shared the same day.

Meeting minutes · IM-11

Meeting	CDE set-up meeting · ACC (now Autodesk Forma)
Attendees	Ana (PM), Chris (BIM Coordinator), Maya (Design Manager), Sam (Specialist Subcontractor – MEP), Luis (Site Manager), Alex (Client, by video)
Status	Draft for review · distributed with follow-up email

Facts & issues	– Three versions of the structural model were found in three different CDE folders; the previous clash run used a superseded version. – Revision C of the first-floor sleeve layout was uploaded directly to Shared as a separate file; revision B remained in the same folder. – First-floor sleeve positions were marked out from the superseded revision. The error was identified before any coring was carried out.
Decisions / agreements	– All project information to be exchanged through the CDE only; project files are not to be exchanged by email, download links or removable media. – CDE to be structured as WIP / Shared / Published / Archived; each team's WIP to be visible to that team only. – Only information in Published may be used for construction. Every publication to be issued with a transmittal. – Revision and status to be recorded as attributes, not in file names; file names to follow the project naming convention.
Pending / not approved	– Structural consultant access to own WIP folder (user details to be confirmed). – Scope of items to be issued to the client for review to be agreed.
Risks / follow-up	– Until the new structure is live, superseded information may still be in use; all set-out to be checked against the current published revision by the Site Manager.

Ref	Owner	Action	Due	Status
A01	Chris	Set up folders, permissions, naming standard and review workflows in ACC	Fri	Open
A02	Chris	Issue CDE protocol (BEP extract) to all teams	Fri	Open
A03	Maya	Process sleeve layout rev C through the review workflow; remove duplicate file from Shared	Today	Open
A04	Luis / Sam	Remove superseded prints from site; brief supervisors: build from Published only	Mon	Open
A05	Chris	Rerun affected clash tests against the current structural model	Wed	Open

Read the minutes like a PM: What is confirmed? What is pending? Who owns each action? When is it due? What has **not** been approved?

Follow-up email · minutes attached

> **To:** Chris; Maya; Sam; Luis; cc Alex
>
> **Subject:** CDE set-up – folder structure, publication rule and actions
>
> Dear all,
>
> Please find attached the minutes of today's CDE set-up meeting.
>
> With immediate effect, all project information is to be exchanged through ACC only. Please do not send drawings or models by email or download link.

Please note the agreed rule: **only information in the Published folder may be used for construction**. Where information is not available in Published, please contact Luis before proceeding.

Actions: Chris – folder structure, permissions, naming standard, review workflows and CDE protocol by Friday. Maya – sleeve layout rev C through the review workflow today. Luis / Sam – superseded prints removed from site by Monday.

Alex, for your information: you will have access to Shared and Published, and items requiring your decision will be issued to you for review.

Best regards,

Ana

Project Manager

Language switch

On site	If it isn't in Published, don't build it.
Minutes	Only information in the Published state of the CDE may be used for construction.
Email	Please ensure that all site activities are based exclusively on information in the Published folder of the CDE.

Project document · CDE Protocol · BEP extract

Platform	ACC (now Autodesk Forma): single source of truth for all project information
Structure	01 WIP (one folder per team) · 02 Shared · 03 Published · 04 Archived
Naming	Project–Originator–Volume–Level–Type–Role–Number · e.g. MBV-STC-ZZ-ZZ-M3-S-0001
Revision & status	Recorded as attributes, not in the file name · P01, P02… while Shared · C01, C02… when Published
Permissions	Own WIP: edit · Shared: view and download (all teams, client) · Published and Archived: read-only; files enter only through an approved workflow
Workflows	WIP → Shared: compliance check (BIM) + content approval (team lead) · Shared → Published: design review (Design Manager) + authorisation (PM)
Transmittals	Every publication issued by transmittal to affected teams; client copied
Site rule	Printed or downloaded copies are uncontrolled; check the current published revision before set-out

Useful language

Find the root cause	I think we've found the root of the problem.
Move from blame to prevention	I'm not interested in whose file it was; I want to make sure it can't happen again.
State the rule	If it isn't in Published, it isn't for construction.
Explain a restriction	WIP is unchecked work; you might be deciding on something that no longer exists.
Handle urgency	We don't skip the check, we speed it up.

Don't say this · Say this

Don't say	Say
I have uploaded the last version.	I've uploaded the latest version. (last = último de todos; latest = más reciente)
The drawing is actualised.	The drawing has been updated.
Upload it in the shared folder.	Upload it to the Shared folder.
Sam's team worked with an old plane.	Sam's team worked from a superseded drawing.

Quick check

Name the four CDE states.	WIP, Shared, Published, Archived.
Why shouldn't the revision go in the file name?	ACC would create a new file instead of a new version of the same file.
Why can't the client see WIP?	It's unchecked; he could decide on information that changes.

What would you say?

A subcontractor calls: "I've got two versions of the same drawing on my laptop. Which one do I use?" What would you say?

Model answer: Neither, for now. Please check ACC: use only the current revision in Published. If it isn't there, don't start; call me and I'll confirm today.

What happened next?

Two weeks later. The new structure is live and the first published set has gone out by transmittal. Luis walks the house with a tablet for the first time: every issue pinned on the sheet, with a photo, an assignee and a due date. By the end of the morning he has found his first problem — not on the walls, but in the app.

What would you say first?

AI PRACTICE 11

Role	Act as a design manager and a client (by video) in a CDE set-up meeting.
Situation	Files are duplicated across folders and a superseded drawing was used on site. I am the BIM Coordinator.
Objective	I must explain WIP / Shared / Published / Archived, the naming rule and who publishes, without blaming anyone.
Level	●● Professional.
Rounds	2 rounds.
Surprise	As the client, ask why you can't see the WIP folders.
Pressure	Ask: "Why can't I just upload it to the shared folder?"
Documentation	Ask me to write the site rule and the naming rule in two lines.
Feedback	Did I explain the risk, not just the rule? Did I use CDE, WIP, superseded, publish and transmittal correctly?

Copy this prompt

Act as a design manager and a client (by video) in a CDE set-up meeting. Files are duplicated across folders and a superseded drawing was used on site. I am the BIM Coordinator. I must explain WIP / Shared / Published / Archived, the naming rule and who publishes, without blaming anyone. Level: ●● Professional. Rounds: 2 rounds. Surprise: As the client, ask why you can't see the WIP folders. Pressure: Ask: "Why can't I just upload it to the shared folder?" Documentation: Ask me to write the site rule and the naming rule in two lines. At the end, give me feedback on: Did I explain the risk, not just the rule? Did I use CDE, WIP, superseded, publish and transmittal correctly?

SITE TAKEAWAY

Shared doesn't mean uploaded. It means checked.

The tool doesn't enforce the process. The protocol does.